

REM GA⁸⁹

125578

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Patent and Trademark Office

SEARCH REQUEST FORM

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Search all claims

Att David Monroe Chapman

PROU - 00092139

Ink-recup time coatings + record
medium

STAFF USE ONLY

Date completed: 6/28/04

Searcher: JC

Terminal time: 120

Elapsed time: 60

CPU time: _____

Total time: 180

Number of Searches: _____

Number of Databases: 4

Search Site

☐ STIC

☐ CM-1

☐ Pre-S

Type of Search

☐ N.A. Sequence

☐ A.A. Sequence

☐ Structure

☒ Bibliographic

Vendors

☐ IG

☒ STN

☐ Dialog

☐ APS

☐ Geninfo

☐ SDC

☐ DARC/Questel

☐ Other



What is claimed:

Claim 1 (original) A coating composition comprising

- (a) non-ionic latex polymer;
- (b) porous inorganic oxide having a pore volume in the range of 0.6 to 3.0 cc/g wherein the inorganic oxide further possesses a cationic charge; and *→ claim 5 silica alumina*
- (c) water soluble polymer

wherein the coating composition has a solids content of at least 20% by weight and has a Brookfield viscosity of 5000 centipose or less.

Claim 2 (original) A composition of claim 1 wherein (a) is polyvinyl acetate.

Claim 3 (original) A composition of claim 2 wherein (a) is polyvinyl acetate homopolymer.

Claim 4 (original) A composition of claim 2 wherein the polyvinyl acetate has a core and shell, further wherein the shell comprises polyvinyl alcohol.

Claim 5 (original) A composition of claim 1 wherein the porous inorganic oxide is silica.

Claim 6 (original) A composition of claim 5 wherein the silica has a pore volume in the range of 0.9 to 2.5 cc/g.

Claim 7 (original) A composition of claim 5 wherein the silica has a coating comprising alumina.

=> FILE HCA

FILE 'HCA' ENTERED AT 15:51:01 ON 28 JUN 2004
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FILE COVERS 1907 - 24 Jun 2004 VOL 141 ISS 1
FILE LAST UPDATED: 24 Jun 2004 (20040624/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D HIS

(FILE 'HOME' ENTERED AT 14:33:09 ON 28 JUN 2004)

FILE 'HCAPLUS' ENTERED AT 14:33:18 ON 28 JUN 2004

E MONROE D/AU

L1 85 S E3-11, S E15-E22
L2 1384 S MONROE ?/AU
L3 721140 S COATING?
L4 220804 S L3/TI
L5 1732408 S POLYMER?
L6 2 S L2 AND L4 AND L5
L7 24 S L2 AND L3
L8 5 S L7 AND L5
L9 3 S L8 NOT L6

FILE 'LCA' ENTERED AT 14:35:44 ON 28 JUN 2004

L10 200 S (LATIC### OR LATEX#####)
L11 4714 S POLYMER? OR MONOMER? OR COPOLYMER? OR CO(W)POLYMER? OR TERPOL
L12 726 S IONIC##
L13 196 S (UN OR NON) (2N) L12 OR NONIONIC? OR UNIONIC?
L14 3430 S OXIDE?
L15 167 S (AQ# OR AQUEOUS# OR WATER#) (2N) L11

FILE 'REGISTRY' ENTERED AT 14:43:26 ON 28 JUN 2004

E SILICA/CN

L16 1 S E3
L17 1015942 S PMS/CI
L18 0 S L16 AND L17

FILE 'LCA' ENTERED AT 14:44:41 ON 28 JUN 2004

L19 11553 S MIXTURE# OR COMPOSIT? OR ADMIXTUR? OR COMIX?

FILE 'HCA' ENTERED AT 14:47:53 ON 28 JUN 2004

L20 65874 S L10 OR LATEX
L21 1931251 S L11 OR POLYMER
L22 235793 S L12 OR IONIC
L23 67539 S L13 OR NONIONIC
L24 16912 S L20(2N)L21
L25 4480 S L23(2N)L21
L26 195 S L24 AND L25

FILE 'HCA' ENTERED AT 14:48:31 ON 28 JUN 2004

L27 640149 S L16 OR SILICA# OR SILCON(2N)(OXIDE# OR DIOXIDE#) OR SIO2
L28 76 S L26 AND L19
L29 6 S L28 AND L27
L30 199414 S L27 AND OXIDE?
L31 12 S L28 AND OXIDE?
L32 17 S L29 OR L31
L33 17 S L32 AND L20
L34 175017 S (AQ# OR AQUEOUS# OR WATER###) (2N) SOLUB?
L35 2 S L33 AND L34
L36 8 S L28 AND L34
L37 54 S L28 AND (AQ# OR AQUEOUS# OR WATER###)
L38 34 S L28 AND (AQ# OR AQUEOUS#)
L39 23 S L33 OR L35 OR L36
L40 410476 S DYE? OR INK? OR COLORANT?
L41 4 S L39 AND L40
L42 23 S L39 OR L41

FILE 'LCA' ENTERED AT 14:54:37 ON 28 JUN 2004

L43 72 S POLYVINYLACETATE# OR POLYVINYL#(N)ACETATE# OR POLY(W)VINYL(N)
L44 2563 S POLYVINYLALCOHOL# OR POLYVINYL#(N)ALCOHOL# OR POLY(W)VINYL(N)
L45 855 S (QUAT# OR QUATERNAR###) (2N) (AMMONI###) OR NH4#
L46 1345 S CATION?

FILE 'HCA' ENTERED AT 15:02:56 ON 28 JUN 2004

L47 24823 S L43
L48 888629 S L44
L49 9342 S L47 AND L48

FILE 'REGISTRY' ENTERED AT 15:03:28 ON 28 JUN 2004

E POLYVINYL ACETATE/CN
E POLYVINYLACETATE/CN

FILE 'HCA' ENTERED AT 15:04:42 ON 28 JUN 2004

L50 4617 S L49 AND L19
L51 548 S L50 AND L27
L52 275302 S L45
L53 21 S L52 AND L51
L54 13 S L51 AND L24
L55 0 S L54 AND L25
L56 2 S L51 AND L25
L57 6 S L53 AND L40
L58 343803 S VISCOS?
L59 4 S L39 AND L40
L60 7 S L39 AND L58
L61 17 S L59 OR L60 OR L56 OR L57
L62 75623 S 64/SX, SC

L63 0 S L61 AND L62
L64 420318 S 63/SX, SC
L65 2 S L61 AND L64
L66 15 S L61 NOT L65
L67 13 S L54 NOT L61
L68 0 S L67 AND L64

FILE 'LCA' ENTERED AT 15:11:38 ON 28 JUN 2004

FILE 'HCA' ENTERED AT 15:12:34 ON 28 JUN 2004

L69 832691 S L19/TI
L70 594692 S L21/TI
L71 4 S L66 AND L69
L72 5 S L66 AND L70
L73 7 S L67 AND (L69 OR L70)
L74 16 S L71 OR L72 OR L73
L75 12 S (L66 OR L67) NOT L74

FILE 'WPIX' ENTERED AT 15:16:19 ON 28 JUN 2004

L76 30684 S L10 OR LATEX
L77 793735 S L11 OR POLYMER
L78 32507 S L12 OR IONIC
L79 38330 S L13 OR NONIONIC
L80 8867 S L76(2N)L77
L81 5259 S (L78 OR L79) (2N)L77
L82 379872 S L77/TI
L83 325576 S L19/TI
L84 150 S L80 AND L81
L85 578149 S SILICA# OR SILCON(2N) (OXIDE# OR DIOXIDE#) OR SIO2 OR OXIDE?
L86 30 S L84 AND L85
L87 9 S L86 AND L83
L88 21 S L86 AND L82
L89 1467204 S L19
L90 21 S L86 AND L89
L91 21 S L87 OR L90
L92 26 S L88 OR L91
L93 5 S L92 NOT L91
L94 11 S L92 AND (L40 OR COLOUR?)
L95 4 S L91 AND VISCOS?
L96 13 S L94 OR L95
L97 17 S L87 OR L96
L98 14724 S (HYDROPHIL? OR HYDROPHOB?) (2N)L77
L99 4 S L97 AND L98
L100 47965 S L45
L101 1 S L91 AND L100
L102 4 S L86 AND L100
L103 4 S L86 AND L100
L104 16 S L93 OR L94 OR L99 OR L101 OR L102
L105 34093 S SILVER#(W)HALIDE#
L106 3 S L104 AND L105
L107 139817 S RECORD?(2N) (SUBSTRAT? OR SURFAC? OR MEDIA# OR MEDIUM?)
L108 4 S L104 AND L107
L109 1 S L106 AND L107
L110 2 S L106 NOT L109
L111 14 S (L104 OR L106 OR L108 OR L109) NOT L110
L112 5749 S RECORD###(2N)ELEMENT##
L113 3 S L111 AND L112
L114 14 S L111 OR L113

L115 18061 S L43
L116 258041 S L44
L117 3 S L114 AND L115
L118 8 S L114 AND L116
L119 14 S L114 OR L117 OR L118
L120 15 S (L88 OR L90 OR L91 OR L92 OR L94 OR L96 OR L97) AND (L115 OR
L121 14 S L120 NOT L110
L122 7 S L120 NOT (L110 OR L119)

FILE 'APOLLIT, RAPRA' ENTERED AT 15:36:59 ON 28 JUN 2004

L123 18236 S L10 OR LATEX
L124 708323 S L11 OR POLYMER
L125 21048 S L12 OR IONIC
L126 2771 S L13 OR NONIONIC
L127 3582 S L123(2N)L124
L128 12802 S (L125 OR L126) (2N)L124
L129 257379 S L124/TI
L130 71191 S L19/TI
L131 129 S L126 AND L127
L132 192375 S L19
L133 51 S L131 AND L132
L134 19 S L133 AND L130
L135 40101 S L40 OR COLOUR?
L136 2109 S RECORD?(2N) (SUBSTRAT? OR SURFAC? OR MEDIA# OR MEDIUM? OR ELEM
L137 0 S L133 AND L136
L138 3 S L134 AND L135
L139 6627 S L43
L140 79337 S L44
L141 1732 S L45
L142 19 S L134 AND L131
L143 19 S L134 OR L138 OR L142
L144 1777 S L98
L145 1 S L143 AND L144
L146 0 S L133 AND L144
L147 19 S L143 OR L145
L148 1 S L147 AND L139
L149 4 S L147 AND L140
L150 0 S L147 AND L141
L151 4 S L133 AND L139
L152 0 S L133 AND L141
L153 0 S L131 AND L141
L154 65404 S L85
L155 22 S L147 OR L148 OR L149 OR L151
L156 6 S L155 AND L154
L157 8 S L133 AND L154
L158 24 S L155 OR L156 OR L157
L159 61779 S COMPOSITION? OR COMPN#
L160 17 S L158 AND L159
L161 24 S L158 OR L160

FILE 'HCA, WPIX, APOLLIT, RAPRA' ENTERED AT 15:52:31 ON 28 JUN 2004

L162 72 DUP REM L74 L75 L119 L122 L161 (1 DUPLICATE REMOVED)

FILE 'APOLLIT, RAPRA' ENTERED AT 15:56:11 ON 28 JUN 2004

SET MSTEPS ON

L163 2 SEA ABB=ON PLU=ON L161 AND L124
L164 22 SEA ABB=ON PLU=ON L161 AND L124

TOTAL FOR ALL FILES

L165 24 SEA ABB=ON PLU=ON L161 AND L124

=> D 174 1-16 CBIB ABS HITIND HITRN

L74 ANSWER 1 OF 16 HCA COPYRIGHT 2004 ACS on STN

140:304961 Manufacture of **composite** articles with a textured surface for automotive panels by depositing a coating layer on a mold surface, physically deforming the coating layer opposite the mold surface and applying a **composite** material on the textured coating surface. Kia, Hamid G.; Kia, Sheila F. (USA). U.S. Pat. Appl. Publ. US 2004071935 A1 20040415, 9 pp., Cont.-in-part of U.S. 6,699,419. (English). CODEN: USXXCO. APPLICATION: US 2003-639306 20030812. PRIORITY: US 2000-587393 20000605; US 2002-PV402673 20020812.

AB The **composite** articles with a textured surface are prepared by the steps comprising the steps of (a) providing a mold having a mold surface, (b) depositing a coating layer on the mold surface, (c) phys. deforming the coating layer opposite the mold surface to form a textured coating surface, and (d) applying a **composite** material on the textured coating surface such that **composite** material adjacent the textured coating surface substantially conforms to and takes the shape of the textured coating surface to form a textured article surface, or the **composite** articles are prepared by the above steps by depositing the coating layer comprising an acrylic **polymer latex** or a solution of **poly(vinyl acetate)** onto the mold surface in step (b), or the **composite** articles are prepared by the above steps by applying a **gel** coat onto the textured coating and applying a fiber-reinforced laminate layer onto the **gel** coat in step (d). A laminate comprising a **mixture** of glass fibers with length 1 in. and a polymer **composition** comprising unsatd. polyester with styrene content 32% 100, wetting additive 1.04, release agent 0.23, CaCO₃ 23, fumed **silica** 1.23, and MeOEt 1.50 parts was used as the laminate layer, and a polyester-based material was used as the **gel** coat layer.

IC ICM B29C041-22

ICS B29C070-30

NCL 428141000; 264255000; 264257000

CC 38-2 (Plastics Fabrication and Uses)

IT Acrylic polymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(coating; **composite** articles with textured surface manufacture by depositing a coating layer on a mold surface, phys. deforming the coating layer opposite the mold surface and applying a **composite** material on the textured surface)

IT Molding of plastics and rubbers

(**composite** articles with textured surface manufacture by depositing a coating layer on a mold surface, phys. deforming the coating layer opposite the mold surface and applying a **composite** material on the textured surface)

IT Reinforced plastics

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(fiber-reinforced; **composite** articles with textured surface manufacture by depositing a coating layer on a mold surface, phys. deforming the coating layer opposite the mold surface and applying a **composite** material on the textured surface)

IT Polyesters, uses

- RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(gel coat layer; **composite** articles with textured surface manufacture by depositing a coating layer on a mold surface, phys. deforming the coating layer opposite the mold surface and applying a **composite** material on the textured surface)
- IT Reinforced plastics
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(glass fiber-reinforced; **composite** articles with textured surface manufacture by depositing a coating layer on a mold surface, phys. deforming the coating layer opposite the mold surface and applying a **composite** material on the textured surface)
- IT Automobiles
(panels; **composite** articles with textured surface manufacture by depositing a coating layer on a mold surface, phys. deforming the coating layer opposite the mold surface and applying a **composite** material on the textured surface for)
- IT Polyesters, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(unsatd., glass fiber-reinforced; **composite** articles with textured surface manufacture by depositing a coating layer on a mold surface, phys. deforming the coating layer opposite the mold surface and applying a **composite** material on the textured surface)
- IT 9003-20-7, **Poly(vinyl acetate)**
RL: TEM (Technical or engineered material use); USES (Uses)
(coating; **composite** articles with textured surface manufacture by depositing a coating layer on a mold surface, phys. deforming the coating layer opposite the mold surface and applying a **composite** material on the textured surface)
- L74 ANSWER 2 OF 16 HCA COPYRIGHT 2004 ACS on STN
139:310071 **Composite polymer** electrolyte membrane for **polymer** electrolyte membrane fuel cells. Fan, Qinbai; Le, Siem (USA). U.S. Pat. Appl. Publ. US 2003194593 A1 20031016, 11 pp. (English). CODEN: USXXCO. APPLICATION: US 2002-139971 20020506. PRIORITY: US 2002-PV373057 20020416.
- AB The invention concerns a polymer electrolyte membrane for a polymer electrolyte membrane fuel cell, which polymer electrolyte membrane has a water-based resin preferably including at least one of vinyl acetate, **dextrin** and latex. At least one acidic material is selected from the group consisting of perfluorosulfonate, polymethyl vinyl ether maleic acid, poly(acrylic acid-maleic acid) copolymer, phosphoric acid, sulfuric acid, hydroxybenzene sulfonic acid, and **mixture** thereof.
- IC ICM H01M008-10
NCL 429033000; 429314000; 429317000; 521027000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
- IT Fuel cell electrolytes
Latex
(**composite polymer** electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT Polyoxyalkylenes, uses
RL: MOA (Modifier or additive use); USES (Uses)

- (fluorine- and sulfo-containing, ionomers; **composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT Polymer electrolytes
(membrane; **composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT Sulfonic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(perfluoro, salts; **composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT Fluoropolymers, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polyoxyalkylene-, sulfo-containing, ionomers; **composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT Ionomers
RL: MOA (Modifier or additive use); USES (Uses)
(polyoxyalkylenes, fluorine- and sulfo-containing; **composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT Fuel cells
(solid electrolyte; **composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT Perfluoro compounds
RL: MOA (Modifier or additive use); USES (Uses)
(sulfonic acids, salts; **composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT 1333-39-7, Hydroxybenzenesulfonic acid 7664-38-2, Phosphoric acid, uses 7664-93-9, Sulfuric acid, uses 9003-20-7, **Polyvinyl acetate** 9004-53-9, **Dextrin** 25153-40-6, Methyl vinyl ether maleic acidcopolymer 29132-58-9, Acrylic acid-maleic acid copolymer
RL: DEV (Device component use); USES (Uses)
(**composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT **7631-86-9, Silica**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(**composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)
- IT **7631-86-9, Silica**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(**composite** polymer electrolyte membrane for polymer electrolyte membrane fuel cells)

L74 ANSWER 3 OF 16 HCA COPYRIGHT 2004 ACS on STN

139:278174 **Composition** for surface treatment of paper for improved ink jet printing. Mason, Geoff; Kimpimaeki, Tomi; Sundberg, Kenneth (Raisio Chemicals Ltd, Finland). PCT Int. Appl. WO 2003078734 A1 20030925, 20 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2003-FI209 20030319. PRIORITY: FI 2002-521 20020319.

AB The invention relates to a **composition** for surface treatment of paper and paperboard to obtain surfaces with improved ink jet printability. The

composition for surface treatment of paper comprises a nanoparticle fraction, and a carrier fraction for detaining the nanoparticles in the surface layer. The carrier fraction comprises plate-like pigment particles, and at least one binder. The invention relates also to the method of manufacturing said **composition** and to its use. Thus, a carrier fraction was prepared by mixing 64.4% talc granulates, 34.8% styrene-butadiene latex, 0.5% antifoaming agent, and 0.3% dispersing agent and water in an mixer. The carrier fraction was then further mixed with a nanoparticle fraction (in slurry form) in a proportion 50/50 in order to obtain a **composition** for surface treatment of paper. As nanoparticles synthetic silicate particles with average particle size apprx.25 nm were used. The solid content was adjusted to 20% with water. The obtained surface treatment **composition** was then added to a **starch** solution, which is used for surface sizing of paper.

- IC ICM D21H017-69
- ICS D21H019-38; B41M005-00
- CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
- ST nanoparticle pigment particle polymeric binder surface treatment **compon** paper
- IT Coating materials
- Paper
 - (**composition** for surface treatment of paper for improved ink jet printing)
- IT Bentonite, uses
- Kaolin, uses
- Mica-group minerals, uses
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (**composition** for surface treatment of paper for improved ink jet printing)
- IT Acrylic **polymers**, uses
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (**latex; composition** for surface treatment of paper for improved ink jet printing)
- IT Silicates, uses
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (phyllosilicates; **composition** for surface treatment of paper for improved ink jet printing)
- IT 14807-96-6, Talc, uses
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (**composition** for surface treatment of paper for improved ink jet printing)
- IT 9003-20-7, Poly(vinyl acetate) 9003-55-8, Butadiene-styrene **copolymer**
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (**latex; composition** for surface treatment of paper for improved ink jet printing)
- IT 471-34-1, Calcium carbonate, uses **7631-86-9, Silica**, uses
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (nanoparticles; **composition** for surface treatment of paper for improved ink jet printing)
- IT **7631-86-9, Silica**, uses
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (nanoparticles; **composition** for surface treatment of paper for improved ink jet printing)

L74 ANSWER 4 OF 16 HCA COPYRIGHT 2004 ACS on STN
137:64694 Ink jet printing method using ink-receptive sheets, and inks

- containing water-dispersible **polymeric** binder. Erdtmann, David; Chen, Huijuan D.; Yau, Hwei-Ling (Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1219690 A1 20020703, 12 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR. (English). CODEN: EPXXDW. APPLICATION: EP 2001-204769 20011210. PRIORITY: US 2000-742961 20001220.
- AB Title process comprises the steps of: (A) providing an ink jet printer that is responsive to digital data signals; (B) loading the printer with ink-receptive elements comprising a support having thereon a porous ink-receptive layer; (C) loading the printer with an ink jet ink **composition** comprising a water-dispersible **polymeric latex** and a water-soluble dye; and (D) printing on an ink-receptive substrate using the ink jet ink in response to the digital data signals. Thus, ink-jet ink was prepared by mixing 4.40 g of C.I. Direct Blue 199 (5% active), 7.14 g of AQ 55 dispersion, 0.12 g Surfynol 465, 7.0 g glycerol, 4.0 g diethylene glycol, and 2.40 g diethylene glycol monobutyl ether (Dowanol DB) in 22.08 g distilled water. The ink exhibits improved stability to light and other environmental contaminants such as ozone.
- IC ICM C09D011-00
ICS B41M005-00
- CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 43, 74
- IT **Gelatins**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(polymeric binder; ink jet printing method using ink-receptive sheets, and inks containing water-dispersible polymeric binder)
- IT Acrylic polymers, uses
RL: MOA (Modifier or additive use); USES (Uses)
(styrene-containing, water-dispersible **polymeric latex**, ink containing; ink jet printing method using ink-receptive sheets, and inks containing water-dispersible polymeric binder)
- IT Polyesters, uses
Polyurethanes, uses
RL: MOA (Modifier or additive use); USES (Uses)
(water-dispersible **polymeric latex**, ink containing; ink jet printing method using ink-receptive sheets, and inks containing water-dispersible polymeric binder)
- IT 471-34-1, Calcium carbonate, uses 1314-13-2, Zinc oxide, uses 1344-28-1, Alumina, uses **7631-86-9, Silica**, uses 7727-43-7, Barium sulfate 13463-67-7, Titanium dioxide, uses
RL: MOA (Modifier or additive use); USES (Uses)
(inorg. particles; ink jet printing method using ink-receptive sheets, and inks containing water-dispersible polymeric binder)
- IT 9002-89-5, **Poly(vinyl alcohol)** 9003-20-7, **Poly(vinyl acetate)** 9003-39-8, Poly(vinyl pyrrolidinone)
RL: MOA (Modifier or additive use); USES (Uses)
(polymeric binder; ink jet printing method using ink-receptive sheets, and inks containing water-dispersible polymeric binder)
- IT **7631-86-9, Silica**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(inorg. particles; ink jet printing method using ink-receptive sheets, and inks containing water-dispersible polymeric binder)
- L74 ANSWER 5 OF 16 HCA COPYRIGHT 2004 ACS on STN
136:281171 Effect of emulsifiers in emulsion **polymerization**. Polotti, G.; Verzotti, T.; Pellizzon, T.; Pellizzon, M. (Lamberti Spa, Albizzate, Italy). World Surfactants Congress, 5th, Firenze, Italy, May

29-June 2, 2000, 911-920. Comite Europeen des Agents de Surface et leurs Intermediaires Organiques: Brussels, Belg. (English) 2000. CODEN: 69BYUW.

AB The essential feature of the emulsion polymerization is that the polymerization occurs

in a large number of particles that normally contain no more than a single polymerizing radical. Particles are formed and stabilized by the effect of one or more emulsifiers. When an emulsifier is used, its type and concentration primarily affects the number of **latex** particles, which in turn affects the rate of polymerization and, depending also on the rate of initiation, the mol. weight of the polymer. Although the phys. properties of the polymer are primarily dependent on its mol. weight and mol. weight distribution, the properties of the **latex** depend on its concentration, average particle size, particle size distribution, and the **viscosity** of the aqueous phase. In spite of its importance the study of emulsifier system **composition** on polymer formed is quite rare. This article wants to add some data on this subject providing examples of reaction run under the same conditions but with different kind of emulsifiers. We tried to correlate typical emulsifier properties (Mol. Structure, HLB, CMC) with standard polymerization quantities (kinetic rate) and product performance (**latex** particle size, **latex** stability).

CC 46-3 (Surface Active Agents and Detergents)

Section cross-reference(s): 37

ST nonionic polyethylene **oxide** ester emulsifier emulsion polymn;
prepn ethyl acrylate methacrylic acid methyl methacrylate

copolymer latex

IT Alcohols, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(C11-14-isoalcs., C13-rich, ethoxylated; effect of nonionic poly(ethylene **oxide**) ester emulsifiers in emulsion polymerization of Et acrylate-methacrylic acid-Me methacrylate **copolymer latexes**)

IT Alcohols, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(C12-13, ethoxylated; effect of nonionic poly(ethylene **oxide**) ester emulsifiers in emulsion polymerization of Et acrylate-methacrylic acid-Me methacrylate **copolymer latexes**)

IT Alcohols, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(C9-11, ethoxylated; effect of nonionic poly(ethylene **oxide**) ester emulsifiers in emulsion polymerization of Et acrylate-methacrylic acid-Me methacrylate **copolymer latexes**)

IT Emulsifying agents

Latex

Surfactants

(effect of nonionic poly(ethylene **oxide**) ester emulsifiers in emulsion polymerization of Et acrylate-methacrylic acid-Me methacrylate **copolymer latexes**)

IT Polymerization

(emulsion; effect of nonionic poly(ethylene **oxide**) ester emulsifiers in emulsion polymerization of Et acrylate-methacrylic acid-Me methacrylate **copolymer latexes**)

IT Polyoxyalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(ethers with C10-C13 oxo-alcs. or C12-C16 linear alcs., surfactant; effect of nonionic poly(ethylene **oxide**) ester emulsifiers in emulsion polymerization of Et acrylate-methacrylic acid-Me methacrylate **copolymer latexes**)

IT Polyoxyalkylenes, uses

- RL: TEM (Technical or engineered material use); USES (Uses)
(ethers, surfactant; effect of nonionic poly(ethylene **oxide**)
ester emulsifiers in emulsion polymerization of Et acrylate-methacrylic
acid-Me methacrylate **copolymer latexes**)
- IT Electric conductivity
Particle size distribution
Viscosity
(of Et acrylate-methacrylic acid-Me methacrylate **copolymer latexes** and effect of nonionic poly(ethylene **oxide**)
ester emulsifiers)
- IT 25133-97-5P, Ethyl acrylate-methacrylic acid-methyl methacrylate
copolymer
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(effect of **nonionic** poly(ethylene **oxide**) ester
emulsifiers in emulsion polymerization of Et acrylate-methacrylic acid-Me
methacrylate **copolymer latexes**)
- IT 9016-45-9 9043-30-5, Polyethylene glycol isotridecyl ether
25322-68-3D, Polyethylene glycol, ethers with C10-C13 oxo-alcs. or C12-C16
linear alcs.
RL: TEM (Technical or engineered material use); USES (Uses)
(surfactant; effect of nonionic poly(ethylene **oxide**) ester
emulsifiers in emulsion polymerization of Et acrylate-methacrylic acid-Me
methacrylate **copolymer latexes**)
- L74 ANSWER 6 OF 16 HCA COPYRIGHT 2004 ACS on STN
135:375640 **Compositions** for solidification and stabilization of
clayey soils, etc., such as sludges and industrial wastes. Fujimasu, Jiro
(Japan). Jpn. Kokai Tokkyo Koho JP 2001323265 A2 20011122, 6 pp.
(Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-179095 20000512.
- AB The **compsns.** consist of (A) 100 weight parts portland cement, high
early-strength cement, white cement, blast-furnace cement, aluminous
cement, jet cement, and/or cement-based solidifying materials and (B)
1.0-4.0 weight parts **mixts.** of (1) Ca chloride 10-20, (2)
silica fine-grain powder 20-30, (3) alkali metal
naphthalenesulfonate and/or alkali metal lignosulfonate 5-15, (4) Ca
acrylate, **poly(vinyl alc.)** powder,
water-soluble phenol-aldehyde polymers, acrylic acid salts, Na salt or Ca
salt of poly(acrylic acid), and/or urea resins 30-50 weight parts. Method
for solidification of soil, etc. by using the **compsns.** with
further addition of natural rubber or synthetic rubber **latex**,
monomers or **polymerized** emulsions of **poly(**
vinyl acetate), poly(2-ethylhexyl acrylate), and vinyl
chloride-vinylidene copolymer is also claimed. Wastes, sludges, and loamy
soil are solidified for their use as paving, etc.
- IC ICM C09K017-44
ICS B09B003-00; C02F011-00; C04B028-02; C09K017-02; C09K017-06;
C09K017-14; C09K017-20; C09K017-22; C09K017-26; C09K017-28;
C04B022-12; C04B022-06; C04B024-18; C04B024-20; C04B024-04;
C04B024-26; C04B024-30; C04B024-24; C09K103-00
- CC 58-5 (Cement, Concrete, and Related Building Materials)
Section cross-reference(s): 60
- ST cement based **compn** soil solidification stabilization; polymer
cement **compn** waste solidification reuse; sludge solidification
reuse latex cement **compn**; loamy soil solidification hydraulic
compn paving
- IT Cement (construction material)
(aluminous; cement-based **compsns.** for solidification and
stabilization of wastes, sludges, and loamy soil for their effective

- use)
- IT Cement (construction material)
Paving materials
Sludges
Soil stabilization
Solidification
Wastes
(cement-based **compns.** for solidification and stabilization of wastes, sludges, and loamy soil for their effective use)
- IT Aminoplasts
Phenolic resins, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(cement-based **compns.** for solidification and stabilization of wastes, sludges, and loamy soil for their effective use)
- IT Natural rubber, uses
Synthetic rubber, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(latex; cement-based **compns.** for solidification and stabilization of wastes, sludges, and loamy soil for their effective use)
- IT Soils
(loamy; cement-based **compns.** for solidification and stabilization of wastes, sludges, and loamy soil for their effective use)
- IT Cement (construction material)
(portland; cement-based **compns.** for solidification and stabilization of wastes, sludges, and loamy soil for their effective use)
- IT Cement (construction material)
(slag; cement-based **compns.** for solidification and stabilization of wastes, sludges, and loamy soil for their effective use)
- IT Cement (construction material)
(white; cement-based **compns.** for solidification and stabilization of wastes, sludges, and loamy soil for their effective use)
- IT 75-01-4, Vinyl chloride, uses 75-01-4D, Vinyl chloride, polymers
79-10-7D, Acrylic acid, salts 103-11-7, 2-Ethylhexyl acrylate
108-05-4, Vinyl acetate, uses 2143-69-3, Vinylidene 6292-01-9, Calcium acrylate **7631-86-9, Silica**, uses 8062-15-5D,
Lignosulfonic acid, alkali metal salt 9002-89-5, **Poly(vinyl alcohol)** 9003-04-7, Poly(acrylic acid) sodium salt 9003-20-7, **Poly(vinyl acetate)**
9003-77-4, Poly(2-ethylhexyl acrylate) 9011-05-6, Urea resin
10043-52-4, Calcium chloride, uses 25155-19-5D, Naphthalenesulfonic acid, alkali metal salt 25987-55-7, Poly(acrylic acid) calcium salt
RL: TEM (Technical or engineered material use); USES (Uses)
(cement-based **compns.** for solidification and stabilization of wastes, sludges, and loamy soil for their effective use)
- IT **7631-86-9, Silica**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(cement-based **compns.** for solidification and stabilization of wastes, sludges, and loamy soil for their effective use)

L74 ANSWER 7 OF 16 HCA COPYRIGHT 2004 ACS on STN
129:8407 Thickening agents for nitrocellulose-free aqueous nail polish **compositions** with good adhesion. Valenty, Vivian B. (VB Cosmetics Inc., USA). U.S. US 5747018 A 19980505, 7 pp., Cont.-in-part of U.S.

Ser. No. 415,143, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1996-728152 19961009. PRIORITY: US 1993-114502 19930831; US 1995-415143 19950329.

- AB Aqueous nail polish **compns.** contain a sulfonate-containing polymer or polymer blend 5-60, a water-soluble **nonionic polymer** 0.1-10, and a water-insol. finely ground (particle size $\leq 50\mu$) powder 0.1-10%. The finely ground powder acts as a thickening agent and improves the adhesive properties of the resins in the nitrocellulose-free aqueous nail polish formulations. The water-soluble polymers not only act as thickeners but also keep the fine powders in suspension, thus providing a more uniform colloidal **mixture** for application to nails. Thus, a Aquarez 7 polymer blend was mixed with **polyvinyl alc.** and titania to give an aqueous nail polish formulation. Both the **polyvinyl alc.** and titania exhibited good thickening properties in Aquarez 7.
- IC ICM A61K007-043
- NCL 424061000
- CC 62-4 (Essential Oils and Cosmetics)
Section cross-reference(s): 38
- ST thickening agent nitrocellulose free nail polish; **polyvinyl alc** thickener nail polish; titania thickener nail polish; water sol polymer thickener nail polish
- IT Polyamides, biological studies
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(aromatic, powdered, thickening agent; fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with good adhesion)
- IT Thickeners
(fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with good adhesion)
- IT Ionomers
RL: BUU (Biological use, unclassified); POF (Polymer in formulation); BIOL (Biological study); USES (Uses)
(fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with good adhesion)
- IT Cosmetics
(nail lacquers; fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with good adhesion)
- IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(polyhydric, powdered, thickening agent; fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with good adhesion)
- IT Polymers, biological studies
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(powdered polyhydric, thickening agent; fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with good adhesion)
- IT Polyamides, biological studies
Polyesters, biological studies
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(powdered, thickening agent; fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with

- good adhesion)
- IT Clays, biological studies
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);
BIOL (Biological study); USES (Uses)
(smectic, thickening agent; fine powders and water-soluble
nonionic polymers as thickeners for
nitrocellulose-free nail polish with good adhesion)
- IT Polymer blends
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(sulfo-containing polymers and vinyl and acrylic polymers; fine powders and
water-soluble **nonionic polymers** as thickeners for
nitrocellulose-free nail polish with good adhesion)
- IT Polyoxyalkylenes, biological studies
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);
BIOL (Biological study); USES (Uses)
(water-soluble polymer thickening agent; fine powders and water-soluble
nonionic polymers as thickeners for
nitrocellulose-free nail polish with good adhesion)
- IT 25035-90-9, Dibutyl maleate-vinyl acetate copolymer 161234-38-4
RL: BUU (Biological use, unclassified); POF (Polymer in formulation); BIOL
(Biological study); USES (Uses)
(blends with sulfo-containing polymers; fine powders and water-soluble
nonionic polymers as thickeners for
nitrocellulose-free nail polish with good adhesion)
- IT 162250-19-3
RL: BUU (Biological use, unclassified); POF (Polymer in formulation); BIOL
(Biological study); USES (Uses)
(blends with vinyl and acrylic polymers; fine powders and water-soluble
nonionic polymers as thickeners for
nitrocellulose-free nail polish with good adhesion)
- IT 7631-86-9, Fumed silica, biological studies
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);
BIOL (Biological study); USES (Uses)
(colloidal, thickening agent; fine powders and water-soluble
nonionic polymers as thickeners for
nitrocellulose-free nail polish with good adhesion)
- IT 192888-79-2, Aquarez 7
RL: BUU (Biological use, unclassified); POF (Polymer in formulation); BIOL
(Biological study); USES (Uses)
(fine powders and water-soluble **nonionic polymers** as
thickeners for nitrocellulose-free nail polish with good adhesion)
- IT 9004-34-6, Cellulose, biological studies
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);
BIOL (Biological study); USES (Uses)
(microcryst., thickening agent; fine powders and water-soluble
nonionic polymers as thickeners for
nitrocellulose-free nail polish with good adhesion)
- IT 9002-88-4, Polyethylene
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);
BIOL (Biological study); USES (Uses)
(powdered, thickening agent; fine powders and water-soluble **nonionic
polymers** as thickeners for nitrocellulose-free nail polish with
good adhesion)
- IT 471-34-1, Calcium carbonate, biological studies 546-93-0, Magnesium
carbonate 1314-13-2, Zinc oxide, biological studies 1332-37-2, Iron
oxide, biological studies 10043-11-5, Boron nitride, biological studies
12173-47-6, Hectorite 13463-67-7, Titania, biological studies

- RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);
BIOL (Biological study); USES (Uses)
(thickening agent; fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with good adhesion)
- IT 9002-89-5, **Poly(vinyl alcohol)** 9003-20-7D,
Polyvinyl acetate, partially hydrolyzed 9003-39-8,
Polyvinylpyrrolidone 9004-54-0D, Dextran, derivs., biological studies
9004-62-0, **Hydroxyethyl cellulose** 9004-64-2,
Hydroxypropyl cellulose 9004-65-3, Hydroxypropyl
methyl cellulose 9005-25-8D, **Starch**,
derivs., biological studies 25322-68-3, **Polyethylene glycol** 25322-69-4,
Polypropylene glycol 25618-55-7,
Polyglycerol 37353-59-6, **Hydroxymethyl cellulose**
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);
BIOL (Biological study); USES (Uses)
(water-soluble polymer thickening agent; fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with good adhesion)
- IT **7631-86-9**, Fumed **silica**, biological studies
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);
BIOL (Biological study); USES (Uses)
(colloidal, thickening agent; fine powders and water-soluble **nonionic polymers** as thickeners for nitrocellulose-free nail polish with good adhesion)
- L74 ANSWER 8 OF 16 HCA COPYRIGHT 2004 ACS on STN
109:56659 Combinations of **polymeric** associative thickeners for aqueous latex paints. Rich, Arthur F.; Benes, Philip C.; Adams, Linus E. (DeSoto, Inc., USA). U.S. US 4735981 A 19880405, 6 pp. (English).
CODEN: USXXAM. APPLICATION: US 1986-914988 19861003.
- AB Thickeners for semi-gloss latex paints with pH ≥ 7.5 and high- and low-shear **viscosities** 0.1-3.5 and 400-1600 P, resp., based on polymers having $\geq 55\%$ vinyl acetate (I) comprise combinations of 1) a urethane polymer having ≥ 3 hydrophobic groups, ≥ 2 of which are terminal hydrophobic groups, the hydrophobic groups being linked by hydrophilic groups and 2) an alkali-**soluble aqueous** emulsion copolymer of α , β -monoethylenically unsatd. carboxylic acid 20-70, monoethylenically unsatd. monomer lacking surfactant capacity 20-80, urethane reaction product of monohydric nonionic surfactant and a monoethylenically unsatd. monoisocyanate 0.5-60, and polyethylenically unsatd. monomer 0-2%. Thus, a 34% solids 15-85 Bu acrylate-I **copolymer latex** semi-gloss paint containing 17.2 volume % TiO₂, 15 lb AMP 95/100 gal, and a 74:26 (solids ratio) **mixture** of Exp 300 (a C12-22-alkyl-terminated polyurethane based on polyethylene glycol) and a copolymer of α , α -dimethyl-m-isopropenylbenzyl isocyanate-ethoxylated nonylphenol reaction product 35, Et acrylate 30, and methacrylic acid 35% exhibited high (brush drag)- and low (leveling)-shear **viscosities** 2.36 and 300 P, resp., and **viscosity** changes 7, 9, 12, 13, and 6 Krebs units after 14 and 28 days at 77° F, 14 and 28 days at 130° F, and 10 days mixing by rolling in cans at 60 rpm, resp.
- IC ICM C08K003-20
ICS C08K005-17; C08L075-04
- NCL 524247000
- CC 42-5 (Coatings, Inks, and Related Products)
- IT 115470-87-6
RL: USES (Uses)

(thickeners, containing acrylic **polymers** having **nonionic** surfactant urethane units, for semi-gloss vinyl latex paints)

L74 ANSWER 9 OF 16 HCA COPYRIGHT 2004 ACS on STN

109:46312 Thermal transfer recording receptor paper having a layer comprising a **nonionic water-soluble polymer**, a **latex**, and a porous pigment. Sugiyama, Takeo; Matsushita, Toshihiko; Morishita, Sadao (Mitsubishi Paper Mills, Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 62257888 A2 19871110 Showa, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1986-102752 19860502.

AB The title receptor paper, which is used together with thermal transfer recording sheets having hot-melt **ink** layers, is prepared by coating a layer whose main constituent is a **nonionic water-soluble polymer** with a polymerization degree of ≤ 1000 , a **latex** with a glass transition temperature (T_g) of $\geq 0^\circ$, and a porous pigment with an oil absorption (JIS-K5101) of 30-200 mL/100 g. This receptor paper provides high quality color images with high resolution and without color unevenness. A paper support was coated with a **composition** containing synthetic zeolite (oil absorption 50 mL/100 g) 100, poly(vinyl alc.) (polymerization degree 500) 20,

and

ethylene-vinyl acetate **latex** (T_g 5°) 20 parts to give the receptor paper. This paper showed good **ink**-oil absorbing properties, and high resolution color images were obtained.

IC ICM B41M005-26

ICS D21H001-22; D21H001-28; D21H005-00

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST thermal transfer recording receptor paper; **nonionic polymer** thermal transfer receptor; **water sol**

polymer image receptor; **latex** image receptor paper; porous pigment image receptor paper; porous pigment image receptor paper

IT Zeolites, uses and miscellaneous

RL: USES (Uses)

(porous pigment, coating **composition**, thermal-transfer receptor paper using)

IT Printing, nonimpact

(thermal-transfer, receptors, coatings for, containing **nonionic water-solubility polymer** and **latex** and porous pigment, for high quality color images)

IT 9002-89-5, Poly(vinyl alcohol)

RL: USES (Uses)

(coating **compns.**, thermal-transfer receptor paper using)

IT 9004-34-6, Cellulose, properties 9005-25-8, Starch, properties

RL: PRP (Properties)

(coating **compns.**, thermal-transfer receptor paper using)

IT 79-10-7D, Acrylic acid, esters, **polymers** 9003-55-8, Butadiene-styrene **copolymer** 24937-78-8, Ethylene-vinyl acetate **copolymer**

RL: USES (Uses)

(**latex**, coating **composition**, thermal-transfer receptor paper using)

IT 471-34-1, Calcium carbonate, properties 7631-86-9, **Silica**, properties

RL: PRP (Properties)

(porous pigment, coating **composition**, thermal-transfer receptor paper using)

IT 1335-30-4

- RL: USES (Uses)
(zeolites, porous pigment, coating **composition**, thermal-transfer receptor paper using)
- IT **7631-86-9, Silica**, properties
RL: PRP (Properties)
(porous pigment, coating **composition**, thermal-transfer receptor paper using)
- L74 ANSWER 10 OF 16 HCA COPYRIGHT 2004 ACS on STN
- 102:167691 Cationic vinyl ester-based **polymer latexes** and their use as formaldehyde-free binders. Shih, Yen Jer; Iovine, Carmine P. (National Starch and Chemical Corp., USA). U.S. US 4489192 A 19841218, 10 pp. (English). CODEN: USXXAM. APPLICATION: US 1983-539038 19831005.
- AB High-solids, low-**viscosity**, alkaline-curable, thermosetting cationic vinyl ester-based latexes useful as binders for HCHO-free end use areas are prepared by copolymerization of $\geq 5\%$ CH₂:CHO₂CR (R = C₁-6 alkyl), 0.5-10% self-crosslinking cationic quaternary ammonium group-containing monomer, and optionally a vinyl monomer in the presence of **water**, a **water-soluble** cationic azo initiator, amino thiol salt chain-transfer agent, and a cationic and/or nonionic surfactant. Thus, 50 g vinyl acetate (I) and 5 g Bu acrylate (II) were added to a **composition** containing cetyltrimethylammonium chloride [112-02-7] surfactant 0.25, polyethylene glycol nonylphenyl ether [9016-45-9] 1.5, 2,2'-azobis(2-amidinopropane-HCl (III) [95906-12-0] initiator 0.1, and water 380 g under N. The **mixture** was heated to 75° before adding, separately and slowly over 4.5 h at 75°, a **mixture** of 200 g I and 245 g II emulsified in 100 g water containing ethoxylated nonylphenols 19.4, cysteamine-HCl [106-89-8] chain transfer agent 0.22, and [CH₂:CMeCONH(CH₂)₃N+Me₂CH₂CH(OH)CH₂Cl]Cl- [70729-70-3] solution 25.7 g and a solution of 0.8 g III in 4 g water. The **mixture** was heated for an additional 10 min at 75° after the additions were completed, and then a solution of 0.1 g III in water was added in 10 min; after heating for 1 h at 75° a latex (47.4% solids) having Brookfield **viscosity** 275 cP was obtained. The copolymer [95890-15-6] having intrinsic **viscosity** 1.5 dL/g (DMF, 30°) was used as a binder in the manufacture of polyester nonwoven fabrics.
- IC ICM C08L033-24
ICS C08L033-14
- NCL 524813000
- CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 40
- ST binder vinyl ester copolymer; alkyl acrylate **copolymer latex**; quaternary ammonium compound copolymer; alkyl curable binder nonwoven; polyester nonwoven cationic binder; chain transfer agent polymer; catalyst emulsion polymer; emulsion polymer vinyl acetate
- IT Chain-transfer agents
(amino thiol salts, **water-soluble**, in emulsion polymerization of vinyl esters for alkaline-curable latex manufacture)
- IT Polyester fibers, uses and miscellaneous
RL: USES (Uses)
(nonwoven fabrics, binders for, cationic vinyl ester-based **polymer latexes** as)
- IT Surfactants
(**nonionic**, in emulsion **polymerization** of vinyl esters for alkaline-curable latex manufacture)
- IT Polymerization catalysts
(radical, azo compounds, **water-soluble**, for emulsion polymerization of vinyl esters in alkaline-curable latex manufacture)

IT 95861-97-5 95861-98-6 95861-99-7 95862-00-3 95862-01-4
95862-02-5 95890-15-6 95890-16-7 95896-67-6

RL: USES (Uses)

(alkaline-curable high-solids low-**viscosity** latexes containing, preparation of, **water-soluble** initiator-chain-transfer agent systems for)

L74 ANSWER 11 OF 16 HCA COPYRIGHT 2004 ACS on STN

102:118541 γ -Dicalcium silicate-containing cement **composition**.

Takagi, Shigehide; Yokota, Norio; Sato, Syohei; Nishi, Toshihiro (Sumitomo Cement Co., Ltd., Japan). Ger. Offen. DE 3419278 A1 19841206, 24 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1984-3419278 19840523. PRIORITY: JP 1983-94031 19830530.

AB The cement **comps.** contain 100 weight parts of a hydraulic cement material containing γ -C2S and 1-20 weight parts of a water-dispersible polymer, e.g, **poly(vinyl acetate)** [9003-20-7] and copolymers, poly(acrylamide) [9003-05-8] and copolymers, polymethacrylamide [25014-12-4] and **copolymers**, **nonionic** alkylcellulose esters, nonionic hydroxyalkylcellulose esters, polyalkylene oxide polymer derivs., polyalkoxypolymer derivs., sulfonic acid group-containing polymers, and optionally ≤ 40 weight% addnl. portland cement, mixed portland cement, aluminous cement, hydraulic lime, Roman cement, natural cement, mixed lime cement, rapid-setting and super-rapid setting cement, or drilling cement. Thus, a white powdered high- γ -C2S cement material obtained by calcining a **mixture** of 100 weight parts calcined lime powder and 54 weight parts powdered **SiO₂**-containing material and cooling had 98% purity, Blaine sp. surface 1500 cm²/g, and contained 67.97% 20-44 μ m particles. An aqueous cement **mixture** was then prepared from the white powder 100, **poly(vinyl acetate)** 5, and water 12 weight parts, molded, pressure set at 30 kg/cm² for 10 min, and hardened for 1 h at 45% humidity and 100° to give sheets with bending strength 750 kg/cm² (715 at 300°), water absorption 0.5%, and linear change rate 0.05%; the sheets passed tests for nonflammable materials.

IC C04B013-24

CC 58-1 (Cement, Concrete, and Related Building Materials)

ST belite cement polymer **compn**; **polyvinyl acetate**
belite cement **compn**; **polyacrylamide** belite cement
compn

L74 ANSWER 12 OF 16 HCA COPYRIGHT 2004 ACS on STN

101:31219 Diazo material with waterborne drafting subbing **composition**

of acrylic resin and aziridine and its use. Whittemore, Jesse E., Jr. (AM International, Inc., USA). U.S. US 4440847 A 19840403, 5 pp. (English). CODEN: USXXAM. APPLICATION: US 1982-409842 19820820.

AB A diazo photoimaging drafting film is described which is capable of being written on and erased. The film contains a drafting sublayer compatible with both a hydrophobic support and a diazo photosensitive coating. The sublayer comprises an acrylic resin emulsion containing an aziridine hardening agent. Thus, to 491 g of a dispersion containing H₂O 220, isopropanol 66, NH₄OH 1.9, Bu cellosolve 33, Bu carbitol 55, Tamol 850 1.5, TiO₂ 1.9, **silica** 221 g were added Hycar 2600 + 237 344, Xama-2 (aziridine) 8.1, H₂O 37, isopropanol 18, NH₄OH 2.2 g to give a **mixture** which was coated on a Mylar support, dried at .apprx.225°F for 30 s to give a drafting film. The film was overcoated with a photosensitive **composition** containing EtOH 566.7, H₂O 197, Carbopol EX-17 121.2, Minusil 5 40, trihydroxydiphenyl 3, 2,5-diethoxy-4-p-tolylmercaptobenzenediazonium chloride 15, 40% hydrolyzed

- poly(vinyl acetate)** 100, Qu G-32 40, rice
starch 80 g, H3PO4 mL, p-toluenesulfonic acid 0.5, Cymel 303 33g,
2% AC **dye** solution 12.5 mL to give a 25 μ thick layer, dried,
imagewise exposed in an NH3-type process diazo machine to give an image.
- IC G03C001-76; G03C001-52; G03C005-34
NCL 430146000
CC 74-10 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
IT 1336-21-6, Ammonium hydroxide ((NH4)(OH))
RL: TEM (Technical or engineered material use); USES (Uses)
(photoimaging diazo drafting film with sublayer containing acrylic resin
and aziridine hardening agent and)
- IT 104-15-4, uses and miscellaneous **7631-86-9, Silica**,
uses and miscellaneous 7664-38-2, Phosphoric acid, uses and
miscellaneous 9003-01-4 9003-08-1 9003-20-7 17228-02-3
29222-39-7, [1,1'-Biphenyl]triol
RL: TEM (Technical or engineered material use); USES (Uses)
(photoimaging film containing drafting sublayer from acrylic resin and
aziridine hardening agent and diazo photosensitive coating containing)
- IT 9005-25-8, **Starch**, uses and miscellaneous
RL: TEM (Technical or engineered material use); USES (Uses)
(rice, photoimaging film with drafting sublayer containing acrylic resin
and aziridine hardening agent and photosensitive diazo overcoat containing)
- IT **7631-86-9, Silica**, uses and miscellaneous
RL: TEM (Technical or engineered material use); USES (Uses)
(photoimaging film containing drafting sublayer from acrylic resin and
aziridine hardening agent and diazo photosensitive coating containing)
- L74 ANSWER 13 OF 16 HCA COPYRIGHT 2004 ACS on STN
78:59856 Aqueous surface-coating **compositions** containing
hydroxyalkyl ethers of galactomannan **gums** as thickeners. Fath,
Joseph; Rosen, Marvin (Tenneco Chemicals, Inc.). U.S. US 3700612
19701024, 3 pp. (English). CODEN: USXXAM. APPLICATION: US 1971-156050
19710623.
- AB The flow and leveling properties and the viscosity stability of
poly(vinyl acetate) (I) [9003-20-7], acrylic,
and Et acrylate-vinyl acetate **copolymer** [25190-97-0]
latex paints were improved by thickening the paints with
hydroxyethyl or hydroxypropyl ethers of guar with a substitution degree
(D.S.) of 0.50-2.0. Thus, an aqueous latex containing Igepal CO-630 (N-99),
ethylene glycol, hexylene glycol, Nopco NDW, Super Ad-it, Na polyacrylate
(25% aqueous) soybean lecithin, hydroxyethyl ether of guar (D.S. 1.28), TiO2,
talc, calcined clay, CaCO3, diatomaceous **silica**, and I (55% aqueous
emulsion) had a viscosity of 82 before and 92 Krebs units after 2 weeks at
120.deg. F and good flow and leveling before and after the aging. A
similar latex containing Methocel 90-HG instead of the hydroxyethyl ether of
guar had a viscosity of 86 before and 102 Krebs units after the heat-aging
and poor flow and leveling before and after the heat-aging.
- IC C08D; C08G
NCL 260017400ST
CC 42-2 (Coatings, Inks, and Related Products)
ST hydroxyalkyl ether guar; guar thickner paint; galactomannan **gum**
thickner; **polyvinyl acetate** paint; acrylic paint;
vinyl acetate copolymer paint
IT Coating materials
(**polyvinyl acetate**, thickening agents, guar
hydroxyalkyl ethers as)
IT Guar **gum**, hydroxyalkyl ethers

RL: USES (Uses)

(as thickening agents for acrylic polymer coatings)

L74 ANSWER 14 OF 16 HCA COPYRIGHT 2004 ACS on STN

76:142467 **Poly(vinyl acetate)** latex white paint

base **compositions** containing a dispersant for paint tint **colorants**. Marion, Donald L.; Anderson, Dennis G.; Strand, Robert C. (Atlantic Richfield Co.). U.S. US 3639325 19720201, 5 pp. (English). CODEN: USXXAM. APPLICATION: US 1968-713291 19680315.

AB Styrene-maleic anhydride copolymer octylphenylpolyethoxylammonium salt*(I), prepared by half-esterifying 1:1 styrene-maleic anhydride copolymer with Triton X-100 and adding NH₄OH to the partial ester, is added to **poly(vinyl acetate)** (II) [9003-20-7] latex paints containing a white pigment and a dispersing agent to improve the compatibility and color development. Thus, 5 lbs. I were added to 1090 lbs. of a **mixture** of II emulsion, **Me cellulose** diethylene glycol, Carbitol, PhHgOAc, water, hydrolyzed styrene-maleic anhydride copolymer ethylene glycol partial ester monobutyl ether **NH₄** salt, TiO₂, Mg silicates, and **Silica** no 1160, to give a paint **composition** which showed no **colorant** flocculation.

IC C08F; C09D

NCL 260029600

CC 42 (Coatings, Inks, and Related Products)

ST **polyvinyl acetate** paint; color dispersant paint; styrene maleic anhydride copolymer; esterification maleic anhydride copolymer; octylphenylpolyethoxyl maleic anhydride copolymer

IT Coating materials

(vinyl acetate polymers, containing maleic anhydride-styrene copolymer octylphenylpoly ethylene glycol ammonium salt, for **colorant** flocculation prevention)

IT 2,5-Furandione, polymer with ethenylbenzene, ester with **polyethylene glycol** p-octylphenylether, ammonium salt Benzene, ethenyl-, polymer with 2,5-furandione, ester with **polyethylene glycol** p-octylphenylether, ammonium salt Poly(oxy-1,2-ethanediyl), α -(4-octylphenyl)- ω -hydroxy-, ester with maleic anhydride-styrene polymer, ammonium salt

RL: USES (Uses)

(vinyl acetate polymer coatings containing, for **colorant** flocculation prevention)

L74 ANSWER 15 OF 16 HCA COPYRIGHT 2004 ACS on STN

58:67410 Original Reference No. 58:11576f-h **Terpolymer**

latex coatings from unsaturated esters of fatty acids, ethyl acrylate, and another acrylic ester or an aromatic vinyl **monomer**. Kray, Raymond J.; Defazio, Charles A. (Celanese Corp. of America). US 3080333 19630305, 4 pp. (Unavailable). APPLICATION: US 19600108.

AB Synthetic **latex** coating having improved properties are prepared from the title ter-**polymer**, a **nonionic** or anionic surfactant, and a H₂O-soluble protective-colloid emulsifying agent. The **latex** is prepared in situ by polymerizing the monomers in the presence of the surfactants and an alkaline material to control pH. The polymer particles in the **latex** are usually 0.1-1.0 μ and the solids content is 40-65% by weight For example, a prepolymerization **mixture** was prepared from 4 parts hydroxyethyl cellulose, 16 parts of a condensation product of 9-10 moles CH₂CH₂ and 1 mole nonylphenol (I), 4 parts of a condensation product of 20 moles ethylene **oxide** (II), and 1 mole I, 2 parts of the condensation product of 4 moles of II and 1

mole I, 2 parts dodecyl Ph Na sulfonate, and 1.2 parts NaHCO₃ in 482 parts H₂O at 60°. K₂S₂O₈ (III) (1.6 parts) was added and a **mixt** . of vinyl acetate 260, Et acrylate 186, and Me acrylate 85 parts were added at 78-80°. During the polymerization, an addnl. 0.8 part III was added. The product contained 54.5% solids and had a **viscosity** of 1880 cp. at 25°. The **latex** film had a tensile product (tensile strength times % elongation) of >440,000. A pigment paste was prepared from TiO₂ 200, fine CaCO₃ pigment 75, talc 75, soybean lecithin 4, 2% aqueous Me cellulose 151, and an aqueous 20% solution 10 parts of polymerized Na salts of alkyl naphthalenesulfonic acids. The paste was mixed with the **latex** to yield a paint containing 40% poly(vinyl chloride). The cured paint film had a scrub resistance of >50,000 strokes.

NCL 260029600
 CC 52 (Coatings, Inks, and Related Products)
 IT Rubber, substitute and synthetic
 (from tetrafluoroethylene and trifluoronitrosomethane, **mixts.** with vinylidene fluoride-perhaloolefin **polymer latex** and **polymerization** in coatings)
 IT Surface-active substances
 (polymerization of esters of fatty acids with Et acrylate and acrylic esters or vinyl compds. to **latexes** in presence of)
 IT Esters
 (polymers of, of fatty acids, with Et acrylate and acrylic ester or vinyl compds., elastomeric **latexes** of)
 IT Vinyl compound polymers, with ethyl acrylate and esters of fatty acids (elastomeric **latexes** of)
 IT Acrylic acid, methyl ester, polymer with Et acrylate and vinyl acetate (to elastomeric **latex**)
 IT 79-10-7, Acrylic acid
 (ester polymers, with Et acrylate and fatty acid esters, elastomeric **latexes** of)
 IT 140-88-5, Acrylic acid, ethyl ester
 (polymers with fatty acid esters and acrylic esters or vinyl compds., and coatings from **latexes** formed in situ)

L74 ANSWER 16 OF 16 HCA COPYRIGHT 2004 ACS on STN
 58:4002 Original Reference No. 58:672d-h,673a Multicolor coating **compositions**. Petty, John L. (Sherwin-Williams Co.). US 3058931 19621016, 10 pp. (Unavailable). APPLICATION: US .

AB A paint latex emulsion is normally pigmented. Dispersed in visibly discrete macroscopic particles in the latex paint carrier is another liquid phase that is immiscible with the emulsion paint system. The macroscopic phase is of a different color than the pigmented latex emulsion paint. Upon application, a base coat of one color is obtained interspersed with particles of another color. Thus, 912 parts by weight bisphenol and 465 parts of epichlorohydrin were heated to 150-60°F. and 1600 parts 20% aqueous NaOH was added slowly at constant temperature The temperature was held at 150-60°F. for 1 hr. after all the NaOH solution had been added. The resinous mass was separated from the aqueous phase, washed until salt-free, and the occluded H₂O present in the resin was distilled The hydrophilic number (HN) of the resin solids was 110. Approx. 60 parts of the resin was heated to 480°F. with 400 parts dehydrated castor oil fatty acids and held to an acid value of 1-2. The resulting ester was cut to 50% solids with a high-boiling naphtha having a Kauri-butanol value of >90. The HN requirement of the solids was 51. Approx. 450 parts by weight of the ester was mixed with CaCO₃-**SiO₂** pigment (Lorite) 250,

molybdate orange 20, diatomaceous earth 100, 4% Pb drier, 2.25, 6% Co drier 0.375, and 6% Mn drier 0.375 part. The paste was ground in a 3-roll mill and thinned by adding 100 parts ester and 108 parts high-flash naphtha (Kauri-butanol value 90). This formed a viscous hydrophobic pigmented varnish of orange base (I). A similar blue base (II) was obtained by substituting 5 parts of phthalocyanine blue for the 20 parts of molybdate orange. The following ingredients were mixed: H₂O 225, TiO₂ 200, black Fe oxide 2, and Lorite 25 parts. The **mixture** was heated to 150°F. and 6 parts high-gel Me

cellulose (4000 cp.) was added and the batch mixed 10-15 min.

Then, 225 parts ice water was added and the **mixture** cooled to room temperature or lower, after which 5 parts sulfonated tallow, 2 parts Na

o-phenyl

phenate, 235 parts 45% emulsion **copolymer** solids **latex** of styrene and butadiene, and 2 parts Co drier were added. To 250 parts by weight of this base, 75 parts I and sep. and later 25 parts II were added. Macroscopic particles of these colors were suspended in visible globules in the emulsion base. Spraying gave a gray base coat with a superimposed spatter coat of visibly large particles of orange and blue paste. In other examples, the black Fe oxide was replaced with phthalocyanine green and ferrite yellow to give a light-green base, and the styrene-butadiene latex emulsion was replaced with a **poly(vinyl**

acetate) emulsion. U.S. 3,058,932; 11 pp. The 2nd dispersed phase in the multicolor oil-in-H₂O emulsion consists of macroscopic discrete particles of an organic, liquid varnish having a H₂O-insol., thixotropic, non-volatile component obtained by heating a polyamide resin of mol. weight 3000-9000 and a vehicle selected from the group consisting of glyceride oils, oil-modified alkyd resins, and varnish ester bodies, above the m.p. of the polyamide resin but <600°F., until a 1-part sample mixed with 9 parts of mineral spirits, when cooled to room temperature, had no graininess and maximum turbidity.

NCL 260017000

CC 52 (Coatings, Inks, and Related Products)

=> D 175 1-12 CBIB ABS HITIND HITRN

L75 ANSWER 1 OF 12 HCA COPYRIGHT 2004 ACS on STN

140:359176 Making coated paper or paperboard and curtain coating method.

Urscheler, Robert; Salminen, Pekka J.; Attal, Jamel F.; Roper, John A., III (Dow Global Technologies Inc., USA). PCT Int. Appl. WO 2004035931 A1 20040429, 32 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-US33114 20021015.

AB A method of producing a coated paper or paperboard, but excluding photog. papers, comprises the steps of (a) forming a free-flowing curtain comprising ≥ 1 layer, the **composition** forming ≥ 1 layer of the free flowing curtain has a high shear viscosity ≥ 50 mPa s, and (b) contacting the curtain with a continuous web substrate of basepaper and paperboard.

IC ICM D21H023-48

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

- Section cross-reference(s): 42
- IT Polysaccharides, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(binder; curtain coating process of high viscosity pigmented **composition** for making coated paper or paperboard)
- IT Clays, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(calcined, coating containing; curtain coating process of high viscosity pigmented **composition** for making coated paper or paperboard)
- IT Paper
Paperboard
(coated; curtain coating process of high viscosity pigmented **composition** for making coated paper or paperboard)
- IT Calcined kaolin
Clays, uses
Diatomite
Kaolin, uses
Mica-group minerals, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(coating containing; curtain coating process of high viscosity pigmented **composition** for making coated paper or paperboard)
- IT Coating process
(curtain; curtain coating process of high viscosity pigmented **composition** for making coated paper or paperboard)
- IT 9004-34-6, Cellulose, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(binder; curtain coating process of high viscosity pigmented **composition** for making coated paper or paperboard)
- IT 9002-89-5, Polyvinyl alcohol 9003-20-7,
Polyvinyl acetate 9003-39-8, Polyvinylpyrrolidone
9003-55-8, Styrene-butadiene copolymer 9003-56-9,
Styrene-butadiene-acrylonitrile copolymer 9011-13-6,
Styrene-maleic anhydride copolymer
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(coating containing latex binder; curtain coating process of high viscosity pigmented **composition** for making coated paper or paperboard)
- IT 471-34-1, Hydrocarb 90ME, uses 1314-13-2, Zinc oxide, uses
7631-86-9, Silica, uses 7727-43-7, Barium sulfate
12344-48-8, Satin white 13397-24-5, Gypsum, uses 13463-67-7, Titanium dioxide, uses 14807-96-6, Talc, uses 21645-51-2, Alumina trihydrate, uses 652991-77-0, DL 966
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(coating containing; curtain coating process of high viscosity pigmented **composition** for making coated paper or paperboard)
- IT 7631-86-9, Silica, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(coating containing; curtain coating process of high viscosity pigmented **composition** for making coated paper or paperboard)

L75 ANSWER 2 OF 12 HCA COPYRIGHT 2004 ACS on STN

138:245664 **Inkjet** recording sheet coated with photographic quality printable coating. Sharma, Jyoti; Gibboni, David James; Lanigan, Elizabeth Joyce (Honeywell International Inc., USA). U.S. US 6534155 B1 20030318, 7 pp., Cont.-in-part of U.S. 6,225,381. (English). CODEN: USXXAM. APPLICATION: US 2000-535950 20000327. PRIORITY: US 1999-289688 19990409.

AB The recording sheet comprises a substrate and a dried coating **composition** on the substrate suitable for photog. quality prints by **ink-jet** printing technol. such as thermal and piezo, wherein the coating **composition** comprises either (i) a hydrophilic or amphiphilic polyether polyurethane plus one or more polymers selected from the group consisting of cellulose ester polymers, cellulose ether polymers and vinyl polymers or (ii) cellulose acetate trimellitate plus optionally one or more polymers selected from the group consisting of cellulose ester polymers, cellulose ether polymers and vinyl polymers; a **quaternary ammonium** compound; a metal salt chelating agent; and a microcryst. filler drying agent.

IC ICM C08J003-00

ICS C08K003-20; C08L001-00; C08L075-00; B41M005-00

NCL 428195000; 524035000; 524013000; 524031000; 524032000; 524037000

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 42

ST **ink jet** printing sheet coating **compn**; polyurethane polyether cellulose ester ether coating

IT **Quaternary ammonium** compounds, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(chlorides, dimethyldiaryl, polymer; **composition** of photog.

quality printable coating on **ink-jet** recording sheet)

IT Balloons

(**composition** of photog. quality printable coating on **ink-jet** recording sheet)

IT Coating materials

(**composition**, on **ink-jet** recording sheet)

IT Cellulose pulp

(filler drying agent; **composition** of photog. quality printable coating on **ink-jet** recording sheet)

IT **Silica gel**, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(filler drying agent; **composition** of photog. quality printable coating on **ink-jet** recording sheet)

IT **Quaternary ammonium** compounds, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(halides, dialkyldiallyl, polymer; **composition** of photog. quality printable coating on **ink-jet** recording sheet)

IT Polyamides, uses

Polycarbonates, uses

Polyesters, uses

Polyolefins

RL: POF (Polymer in formulation); TEM (Technical or engineered material

- use); USES (Uses)
 (optional blends, as substrate; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT Polyurethanes, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (polyether-; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT Halides
 RL: TEM (Technical or engineered material use); USES (Uses)
 (**quaternary ammonium** halides, dialkyldiallyl, polymer; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT Nonwoven fabrics
 Paper
 Plastic films
 Textiles
 (substrate; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT Polymer blends
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (substrate; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT **Ink-jet** recording sheets
 (with photog. quality printable coating)
- IT **7631-86-9, Silica**, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (amorphous, filler drying agent; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT 75-21-8D, Ethylene oxide, copolymer 9002-89-5, **Polyvinyl alcohol** 9003-20-7, **Polyvinyl acetate** 9003-39-8D, Polyvinyl pyrrolidone, optionally styrenated 9004-34-6D, Cellulose, hydroxyalkyl derivs. 9004-35-7, Cellulose acetate 9004-36-8, Cellulose acetate butyrate 9004-38-0, Cellulose acetate phthalate 9004-39-1, Cellulose acetate propionate 9050-31-1, Hydroxypropyl **methyl cellulose** phthalate 25086-89-9, Vinyl pyrrolidone-vinyl acetate copolymer 30870-78-1, Poly(diallylethylamine hydrochloride) 48042-45-1D, Diallyldimethylammonium, halide salt, polymer 96352-13-5, Hydroxy propyl **ethyl cellulose** phthalate 157467-45-3, Poly(diallylmethylammonium phosphate)
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (**composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT 1344-28-1, Alumina, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (filler drying agent; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT 9004-34-6, Cellulose, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (microcryst., filler drying agent; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-07-0, Polypropylene 25038-59-9, Polyethylene terephthalate, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

- (optional blends, as substrate; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- IT **7631-86-9, Silica**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(amorphous, filler drying agent; **composition** of photog. quality printable coating on **ink-jet** recording sheet)
- L75 ANSWER 3 OF 12 HCA COPYRIGHT 2004 ACS on STN
136:371223 Ink jet ink with water insoluble azo dye and ink jet printing method. Chen, Huijuan Diana; Erdtmann, David; Carroll-Lee, Ann Louise; Evans, Steven (Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1205522 A1 20020515, 9 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR. (English). CODEN: EPXXDW. APPLICATION: EP 2001-204151 20011029. PRIORITY: US 2000-709078 20001110.
- AB An ink jet printing method, comprises the steps of: A) providing an ink jet printer that is responsive to digital data signals; B) loading the printer with ink-receptive elements comprising a support having thereon a porous ink-receptive layer; C) loading the printer with an ink jet ink **composition** comprising a water-dispersible **polymeric latex** having contained therein a water-insol., salt-type dye; and D) printing on the ink-receptive layer using the ink jet ink in response to the digital data signals.
- IC ICM C09D011-00
ICS B41M005-00
- CC 42-12 (Coatings, Inks, and Related Products)
- IT Acrylic polymers, uses
Gelatins, uses
Polyesters, uses
Polyurethanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(ink jet ink with water insol. azo dye)
- IT 9002-89-5, **Poly(vinyl alcohol)** 9003-20-7, **Poly(vinyl acetate)** 9003-39-8, Poly(vinyl pyrrolidinone) 54590-72-6, Eastman AQ 55
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(ink jet ink with water insol. azo dye)
- IT 471-34-1, Calcium carbonate, uses 1314-13-2, Zinc oxide, uses 1344-28-1, Alumina, uses **7631-86-9, Silica**, uses 7727-43-7, Barium sulfate 13463-67-7, Titanium dioxide, uses 423177-76-8 424839-22-5
RL: TEM (Technical or engineered material use); USES (Uses)
(ink jet ink with water insol. azo dye)
- IT **7631-86-9, Silica**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(ink jet ink with water insol. azo dye)
- L75 ANSWER 4 OF 12 HCA COPYRIGHT 2004 ACS on STN
135:218743 Ink-jet printing method. Chen, Huijuan; Evans, Steven; Reczek, James (Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1127707 A1 20010829, 9 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-200480 20010212. PRIORITY: US 2000-510879 20000223.
- AB An ink jet printing method, comprising the steps of: (a) providing an ink-jet printer that is responsive to digital data signals; (b) loading

the printer with ink-receptive elements comprising a support having thereon a porous ink-receptive layer; (c) loading the printer with an ink-jet ink **composition** comprising a H₂O-dispersible **polymeric latex** having contained therein a H₂O-insol. dye; and (d) printing on an ink-receptive substrate using the ink-jet ink in response to the digital data signals.

- IC ICM B41M005-00
ICS C09D011-00
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 42
- IT Ink-jet printing
Inks
(ink-jet printing **composition** containing water-dispersible **latex polymer** with water-insol. dye)
- IT **Gelatins**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(ink-jet printing **composition** containing water-dispersible **latex polymer** with water-insol. dye)
- IT Clays, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ink-jet printing **composition** containing water-dispersible **latex polymer** with water-insol. dye and ink-receptor layer containing)
- IT 54590-72-6P, AQ 55S 357339-11-8P 357339-12-9P 357339-13-0P
357339-14-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ink-jet printing **composition** containing water-dispersible **latex polymer** with water-insol. dye)
- IT 9002-89-5P, **Polyvinyl alcohol** 9003-20-7P,
Poly(vinyl acetate) 9003-39-8P, Poly(vinyl pyrrolidone)
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ink-jet printing **composition** containing water-dispersible **latex polymer** with water-insol. dye and binder layer containing)
- IT 471-34-1P, Calcium carbonate, preparation 1314-13-2P, Zinc oxide, preparation 1344-28-1P, Alumina, preparation **7631-86-9P**, **Silica**, preparation 7727-43-7P, Barium sulfate 13463-67-7P, Titania, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ink-jet printing **composition** containing water-dispersible **latex polymer** with water-insol. dye and ink-receptor layer containing)
- IT **7631-86-9P**, **Silica**, preparation
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(ink-jet printing **composition** containing water-dispersible **latex polymer** with water-insol. dye and ink-receptor layer containing)

L75 ANSWER 5 OF 12 HCA COPYRIGHT 2004 ACS on STN
134:179871 Coating materials for sewn products containing adhesives and workability improvers for imparting various functional properties to the

sewn products and manufacture of coating materials therefor and coating
sewn products with coatings therefrom. Sadanari, Shigeyuki; Kimura,
Masanao (Yuken Chemical K. K., Japan). Jpn. Kokai Tokkyo Koho JP
2001049581 A2 20010220, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION:
JP 1999-222277 19990805.

- AB The coatings essentially contain **mixts.** (A) comprising
adhesives, viscosity adjustors, workability improvers, and color adjusting
agents, or the coating materials comprise (A) **mixts.** containing
softening agents or A **mixts.** containing **dye** discharging
agents or A **mixts.** containing color developing agents or A
mixts. containing water repellents or A **mixts.** containing metals
or vapor-deposited metal-coated substances or A **mixts.** containing
ceramics. Coated sewn products are prepared by coating sewn products with A
mixts. by the roller coating method, spray coating method, or
printing method, drying the coating, and hot pressing the coating. Aqueous
aliphatic polyester-polyurethane dispersion 40, di-Me polysiloxane 5,
monoethylene glycol 5, monoethanolamine 4, alkyl ether-type nonionic
surfactant 2, carbolic acid 0.5, waterborne pigment 4, isocyanate
crosslinking agent 4, and H2O 39.5 parts were mixed to give a coating
composition A jean was coated with the coating **composition**,
dried, and hot pressed to give a jean exhibiting leather-like surface and
showing good smoothness and luster.
- IC ICM D06M015-564
ICS C09D007-12; C09D201-00
- CC 40-5 (Textiles and Fibers)
- IT **Dyes**
(acid, color adjustors; coating materials for sewn products containing
adhesives and workability improvers for imparting various functional
properties to the sewn products and manufacture of coating materials
therefor)
- IT Polyelectrolytes
(anionic, **dye** discharging agents; coating materials for sewn
products containing adhesives and workability improvers for imparting
various functional properties to the sewn products and manufacture of
coating materials therefor)
- IT **Dyes**
(cationic, color adjustors; coating materials for sewn products containing
adhesives and workability improvers for imparting various functional
properties to the sewn products and manufacture of coating materials
therefor)
- IT **Inks**
(ceramic **inks**, color adjustors; coating materials for sewn
products containing adhesives and workability improvers for imparting
various functional properties to the sewn products and manufacture of
coating materials therefor)
- IT Caseins, uses
Gelatins, uses
Natural rubber, uses
Proteins, general, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(coating; coating materials for sewn products containing adhesives and
workability improvers for imparting various functional properties to
the sewn products and manufacture of coating materials therefor)
- IT Disperse **dyes**
Pigments, nonbiological
Reactive **dyes**
(color adjustors; coating materials for sewn products containing adhesives
and workability improvers for imparting various functional properties

- to the sewn products and manufacture of coating materials therefor)
- IT **Dyes**
(color developers; coating materials for sewn products containing adhesives and workability improvers for imparting various functional properties to the sewn products and manufacture of coating materials therefor)
- IT Amino acids, uses
Fats and Glyceridic oils, uses
Hydrocarbon oils
Paraffin waxes, uses
Polyurethanes, uses
Quaternary ammonium compounds, uses
Waxes
RL: MOA (Modifier or additive use); USES (Uses)
(softening agents; coating materials for sewn products containing adhesives and workability improvers for imparting various functional properties to the sewn products and manufacture of coating materials therefor)
- IT **Dyes**
(vat, color adjustors; coating materials for sewn products containing adhesives and workability improvers for imparting various functional properties to the sewn products and manufacture of coating materials therefor)
- IT 9000-30-0, Guar **gum** 9000-40-2, Locust bean **gum**
9002-88-4, Polyethylene 9002-89-5, **Poly(vinyl alcohol)** 9003-20-7D, **Poly(vinyl acetate)**, saponified 9004-32-4, Carboxymethylcellulose 9004-62-0, Hydroxyethylcellulose 9004-67-5, Methylcellulose 9005-25-8, α -**Starch**, uses 9005-25-8D, **Starch**, cationic derivs., uses 9005-25-8D, **Starch**, oxidized, uses 9005-27-0, Hydroxyethyl **starch** 9005-37-2, Propylene glycol alginate 9016-00-6, Poly(dimethylsiloxane) 9045-28-7, Acetyl **starch** 9057-06-1, Carboxymethyl **starch** 11120-02-8, **Starch** phosphate 30811-69-9, Poly(vinyl acrylate) 31900-57-9, Poly(dimethylsiloxane) 39386-78-2, Tamarind seed **gum**
RL: TEM (Technical or engineered material use); USES (Uses)
(coating; coating materials for sewn products containing adhesives and workability improvers for imparting various functional properties to the sewn products and manufacture of coating materials therefor)
- IT **7631-86-9**, Colloidal **silica**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal, water repellent; coating materials for sewn products containing adhesives and workability improvers for imparting various functional properties to the sewn products and manufacture of coating materials therefor)
- IT 7772-98-7, Sodium hyposulfite 7772-99-8, Stannous chloride, uses
7775-14-6, Sodium hyposulfite
RL: MOA (Modifier or additive use); USES (Uses)
(**dye** discharging agent; coating materials for sewn products containing adhesives and workability improvers for imparting various functional properties to the sewn products and manufacture of coating materials therefor)
- IT 50-70-4, Sorbitol, uses 57-13-6, Urea, uses 107-21-1, Monoethylene glycol, uses 111-46-6, Diethylene glycol, uses 112-27-6, Triethylene glycol 25322-68-3, **Polyethylene glycol**
RL: MOA (Modifier or additive use); USES (Uses)
(workability improver; coating materials for sewn products containing adhesives and workability improvers for imparting various functional properties to the sewn products and manufacture of coating materials therefor)

- IT **7631-86-9**, Colloidal **silica**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal, water repellent; coating materials for sewn products containing adhesives and workability improvers for imparting various functional properties to the sewn products and manufacture of coating materials therefor)
- L75 ANSWER 6 OF 12 HCA COPYRIGHT 2004 ACS on STN
133:336656 Cationic **latex** binders and their use in **ink-jet** printing receiving layers for improving **ink** receptivity and printability. Otsuka, Masahiko; Osako, Isao (Asahi Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000313847 A2 20001114, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-123913 19990430.
- AB The binders are obtained from (A) a copolymer of radical-polymerization monomer bearing tertiary amine or/and quaternary ammonium group and comonomers, and (B) a **copolymer** of **nonionic** radical-**polymn** . **monomer** and crosslinkable radical monomers as a **mixt** . of A and B or core-shell polymer particles. Thus, polymerizing (A) a **mixture** of dimethylaminopropylacrylamide Me chloride salt, Me methacrylate and Bu acrylate in aqueous emulsion, and (B) a **mixture** of Me methacrylate, Bu acrylate and methacryloxypropyltrimethoxysilane gave a copolymer A and a copolymer B, resp., which were mixed to give a **latex** having solids content 40%. Coating a **composition** containing the **mixture** above 100, Finesil X 37 (**silica**) 200 and water 1000 parts on a paper to dry pickup weight of 10 g/m2 then calendering gave a coated paper with good color **ink-jet** printability and resistance to water.
- IC ICM C09D151-06
ICS B41J002-01; B41M005-00; C08F002-44; C08F220-10; C08F220-56; C09D005-02; C09D125-18; C09D133-00; C09D139-04; C09D157-00
- CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 43, 74
- ST **latex** coating paper **ink** jet **ink** printability
- IT **Ink-jet** printing
(cationic **latex** binders and use in **ink-jet** printing receiving layers for improving **ink** receptivity and printability)
- IT Coating materials
(**latex**, binder; cationic **latex** binders and use in **ink-jet** printing receiving layers for improving **ink** receptivity and printability)
- IT Paper
(printing; cationic **latex** binders and use in **ink-jet** printing receiving layers for improving **ink** receptivity and printability)
- IT 304466-55-5P, Butyl acrylate-dimethylaminopropylacrylamide methyl chloride salt-methyl methacrylate-γ-methacryloxypropyltrimethoxysilane graft **copolymer** 304466-56-6P, Acrylamide-butyl acrylate-dimethylaminopropylacrylamide methyl chloride salt-methyl methacrylate-γ-methacryloxypropyltrimethoxysilane graft **copolymer**
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)
(core/shell **latex** coating binders; cationic **latex** binders and use in **ink-jet** printing receiving layers for improving **ink** receptivity and printability)
- IT 91829-56-0P, Butyl acrylate-methyl methacrylate-γ-methacryloxypropyltrimethoxysilane **copolymer** 154500-23-9P,

Butyl acrylate-N,N-dimethylaminopropylacrylamide methyl chloride
salt-methyl methacrylate **copolymer**

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); PREP (Preparation); USES (Uses)

(**latex** coating binders; cationic **latex** binders and
use in **ink**-jet printing receiving layers for improving
ink receptivity and printability)

L75 ANSWER 7 OF 12 HCA COPYRIGHT 2004 ACS on STN

132:100489 **Ink**-receptive coating for **ink**-jet recording
material. Chapman, David Monroe (W.R. Grace & Co.-Conn., USA). PCT Int.
Appl. WO 2000002736 A1 20000120, 45 pp. DESIGNATED STATES: W: AE, AL,
AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES,
FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG; RW: AT, BE, BF, BJ, CF, CG,
CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR,
NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO
1999-US15328 19990708. PRIORITY: US 1998-PV92139 19980709.

AB A **composition** for forming an **ink**-receptive coating for an
ink-jet recording material comprises an inorg. **oxide**,
e.g., **silica**, in combination with a binder comprising a
mixture of a **water-soluble polymer** and a
nonionic latex. The **composition** may contain an
optional **dye** mordant (e.g., a cationic polymer). The
combination of the components results in the **composition** having a
relatively high solids content (greater than 20 weight%) and a relatively low
viscosity (less than 5000 cP), exhibiting no coating dusting, and
giving an **ink**-receptive coating with an exceptional **ink**
-jet printability.

IC B41M005-00; D21H019-58

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

ST **ink** jet recording material inorg **oxide** nonionic
latex; **water sol** polymer **ink** jet
recording material

IT **Ink**-jet recording sheets
(**ink**-receptive coatings containing inorg. **oxides**,
water-soluble polymers, and **nonionic**
latexes for)

IT 9002-89-5, Poly(vinyl alcohol) 9003-20-7, Vinac XX210
RL: TEM (Technical or engineered material use); USES (Uses)
(**ink**-receptive coatings for **ink**-jet printing containing
inorg. **oxides**, **nonionic latexes** and)

IT 26062-79-3, CP261LV
RL: TEM (Technical or engineered material use); USES (Uses)
(**ink**-receptive coatings for **ink**-jet printing containing
inorg. **oxides**, **water-soluble polymers** and)

IT 1344-28-1, Alumina, uses 7631-86-9, **Silica**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**ink**-receptive coatings for **ink**-jet printing containing
water-soluble polymers, **nonionic**
latexes and)

IT 7631-86-9, **Silica**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**ink**-receptive coatings for **ink**-jet printing containing
water-soluble polymers, **nonionic**
latexes and)

L75 ANSWER 8 OF 12 HCA COPYRIGHT 2004 ACS on STN

128:315085 Laminatable backing substrates containing fluoro compounds for improved toner flow. Malhotra, Shadi L. (Xerox Corporation, USA). U.S. US 5744273 A 19980428, 23 pp. (English). CODEN: USXXAM. APPLICATION: US 1996-720643 19961002.

AB Simulated photog.-quality prints are created using non-photog. imaging such as xerog. and ink jet. Reverse or wrong reading toner images are formed on a transparent substrate which is adhered to a coated backing substrate. The backing substrate is coated with a two layered adhesive **composition** where the first layer in contact with the substrate of the backing substrate is a polymeric material which serves as an adhesive and has a glass transition temperature of less than 55° C. The second layer on the top of the adhesive layer is a blend of a hydrophilic polymer having a m.p. greater than 50° C. and a fluoro compound containing from 1 to about 25 fluorine atoms. The desired m.p. of the fluoro compound is less than 100° C. and preferably between about 50° to about 100° C. The fluoro compound in combination with the hydrophilic polymer serves as a toner wetting agent for providing an enhanced optical interface. It also protects the adhesive polymer which has a lower m.p. than the hydrophilic polymer as well as the fluoro compound from premature activation.

IC ICM G03G013-14

NCL 430097000

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 88-24-4, 2,2'-Methylenebis(6-tert-butyl-4-ethylphenol) 88-27-7, 2,6-Di-tert-butyl-4-(dimethylaminomethyl)phenol 88-30-2, 4-Nitro-3-(trifluoromethyl) phenol 119-47-1, 2,2'-Methylenebis(6-tert-butyl-4-methylphenol) 123-28-4, Didodecyl-3,3'-thiodipropionate 313-72-4, Octafluoro-naphthalene 314-98-7 321-60-8, 2-Fluorobiphenyl 336-08-3, Perfluoroadipic acid 344-03-6, 1,4-Di-bromotetrafluorobenzene 344-18-3, 2,6-Dibromo-4-fluoroaniline 344-20-7, 2,6-Dibromo-4-fluorophenol 345-70-0, 3,3'-Difluorobenzophenone 346-55-4, 4-Chloro-7-(trifluoromethyl)quinoline 351-28-0, 3'-Fluoroacetanilide 354-28-9, 2-Chloro-2,2-difluoroacetamide 354-38-1, 2,2,2-Trifluoroacetamide 355-74-8, 2,2,3,3,4,4,5,5-Octafluoro-1,6-hexanediol 363-52-0, 3-Fluorocatechol 367-34-0, 2,4,5-Trifluoroaniline 375-95-1, Heptadecafluorononanoic acid 376-73-8, Hexafluoroglutaric acid 392-95-0, 2-Chloro-3,5-dinitrobenzotrifluoride 393-75-9, 4-Chloro-3,5-dinitrobenzo-trifluoride 394-32-1, 5'-Fluoro-2'-hydroxyacetophenone 398-23-2, 4,4'-Difluorobiphenyl 399-31-5, 2'-Fluoroacetanilide 434-90-2, Decafluorobiphenyl 455-15-2, 4-Fluorophenyl methyl sulfone 471-34-1, Calcium carbonate, uses 646-30-0, Nonadecanoic acid 653-11-2, 2,3,5,6-Tetrafluorophenylhydrazine 657-06-7, 2-Chloro-5-(trifluoromethyl)benzoic acid 668-45-1, 2-Chloro-6-fluorobenzonitrile 693-36-7, Dioctadecyl-3,3'-thiodipropionate 727-99-1, 2-(Trifluoromethyl)benzophenone 828-73-9, Penta fluorophenylhydrazine 853-39-4, Decafluorobenzophenone 893-33-4 1201-31-6, 2,3,4,5-Tetrafluorobenzoic acid 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconium oxide, uses 1314-98-3D, Zinc sulfide, blend with barium sulfate 1682-20-8, 4-Amino-2,3,5,6-tetrafluoropyridine 1709-70-2, 1,3,5-Trimethyl-2,4,6-tris(3,5-di-tert-butyl-4-hydroxybenzyl)benzene 1766-76-3 1835-65-0, Tetrafluorophthalonitrile 1868-85-5 1944-05-4, 2,3,4,5,6-Pentafluoro-benzhydrol 1998-66-9 2043-53-0, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-Heptadecafluoro-10-iododecane 2200-71-7 2613-34-5, 3-Chloro-2,4-difluoroaniline 3883-86-1, 2,2',3,3',5,5',6,6'-Octafluorobiphenyl 7631-86-9, Colloidal

silica, uses 7727-43-7, Barium sulfate 7789-75-5D, Calcium fluoride, blend with **silica** 9002-86-2, Poly(vinyl chloride) 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-08-1, Melamine-formaldehyde resin 9003-09-2, Polyvinyl methyl ether 9003-11-6 9003-17-2, Polybutadiene 9003-17-2D, Polybutadiene, Ph terminated 9003-17-2D, Polybutadiene, dicarboxy terminated 9003-20-7, **Poly (vinyl acetate)** 9003-21-8, Poly(methyl acrylate) 9003-27-4, Poly(isobutylene) 9003-28-5, Poly(1-butene) 9003-31-0, Polyisoprene 9003-32-1, Poly(ethyl acrylate) 9003-44-5, Poly(vinyl isobutyl ether) 9003-49-0, Poly(n-butyl acrylate) 9003-53-6, Polystyrene latex 9003-63-8, Poly(n-butyl methacrylate) 9003-77-4, Poly(2-ethylhexyl acrylate) 9003-95-6, Poly(vinyl stearate) 9004-57-3, Ethylcellulose 9006-26-2, Ethylene-maleic anhydride copolymer 9010-79-1, Ethylene-propylene copolymer 9010-85-9 9010-86-0, Ethylene-ethyl acrylate copolymer 9010-98-4, Polychloroprene 9011-05-6, Urea-formaldehyde resin 9011-05-6D, Urea-formaldehyde resin, alkylated 9011-16-9, Vinyl methyl ether-maleic anhydride copolymer 9011-53-4 9012-09-3, Cellulose triacetate 9020-32-0, Polyethylene naphthalate 9036-63-9, Poly(isooctyl acrylate) 10101-39-0 10595-72-9, Ditridecyl-3,3'-thiodipropionate 13463-67-7, Titanium dioxide, uses 14704-41-7, 3,5-Bis(trifluoromethyl)pyrazole 16297-07-7 16432-81-8, 2-(4-Benzoyl-3-hydroxyphenoxy)ethyl acrylate 16545-54-3 16840-25-8, Tetrafluororesorcinol 18627-23-1, 2-Chloro-3,5-difluoroanisole 19282-52-1 21645-51-2, Hydrated alumina, uses 23779-97-7, 4-Chloro-8-(trifluoromethyl)quinoline 24938-37-2, Poly(ethylene adipate) 24969-10-6, Epichlorohydrin-ethylene oxide copolymer 24979-82-6, Poly(n-propyl acrylate) 24981-14-4, Poly(vinyl fluoride) 25035-78-3, Poly(diallyl isophthalate) 25035-84-1, Poly(vinyl propionate) 25036-21-9, Poly(benzyl acrylate) 25053-15-0, Poly(diallyl phthalate) 25087-17-6, Poly(n-hexyl methacrylate) 25103-87-1, Poly(1,4-butylene adipate) 25153-40-6, Vinyl methyl ether-maleic acid copolymer 25153-40-6D, Methyl vinyl ether-maleic acid copolymer, esters 25232-27-3, Poly(tert-butyl acrylate) 25249-16-5, Poly(2-hydroxyethyl methacrylate) 25266-02-8, Octadecene-1-maleic anhydride copolymer 25266-13-1, Poly(octyl acrylate) 25322-68-3 25569-53-3, Poly(ethylene succinate) 25609-74-9 25639-21-8, Poly(octadecyl methacrylate) 25719-51-1, Poly(2-ethylhexyl methacrylate) 25719-52-2, Poly(lauryl methacrylate) 25986-77-0, Poly(octadecyl acrylate) 26022-14-0, Poly(2-hydroxyethyl-acrylate) 26124-32-3, Poly(isopropyl acrylate) 26246-92-4, Poly(lauryl acrylate) 26715-88-8, Poly(vinyl pivalate) 26716-20-1, Poly(2-tert-butylaminoethyl methacrylate) 26760-99-6, Poly(ethylene azelate) 27103-47-5, Poly(n-hexyl acrylate) 27458-65-7, Poly(cyclohexyl acrylate) 27516-89-8 28158-21-6, Poly(trimethylene succinate) 28265-35-2, Butadiene-maleic acid copolymer 28628-64-0, Poly(2-methoxy ethyl acrylate) 29320-53-4, Poly(n-decyl methacrylate) 29500-86-5, Poly(decyl acrylate) 29963-76-6, Poly[2-(4-benzoyl-3-hydroxyphenoxy)-ethyl acrylate] 32707-89-4, 3,5-Bis(trifluoromethyl)benzyl alcohol 35853-45-3, 4-Bromo-2,8-bis(trifluoromethyl)quinoline 36568-42-0, Poly(trimethylene adipate) 36750-88-6 37200-12-7, Poly(isodecyl methacrylate) 40601-76-1 42580-42-7, 2,5-Bis(trifluoromethyl)benzoic acid 47250-53-3 52256-48-1, Poly(trimethylene glutarate) 54841-40-6, Poly(isodecyl acrylate) 60702-69-4, 2-Chloro-4-fluorobenzonitrile 62501-03-5, Poly(hydroxypropyl acrylate) 66987-22-2, Poly(vinyl neodecanoate) 67845-93-6, Hexadecyl 3, 5-di-tert-butyl-4-hydroxy-benzoate 69452-84-2, 1-Bromo-4-chloro-2,3,5,6-tetrafluorobenzene 71301-96-7 72779-48-7, **Hydroxyethyl cellulose** methacrylate 74266-66-3 76796-25-3 79456-26-1 79720-19-7 84194-36-5, 2-Chloro-4-

- fluorobenzaldehyde 97108-50-4, 2,5-Difluorophenylhydrazine
105184-38-1, 3,5-Difluorophenylacetic acid 106917-30-0 106917-31-1
111483-45-5, **Hydroxyethyl cellulose** acrylate
115665-96-8 117482-84-5, 3-Chloro-4-fluorobenzonitrile 124005-68-1
124185-35-9 141474-37-5, 2,4-Dibromo-6-fluoroaniline 148416-38-0
192818-73-8 206559-65-1 206559-67-3 206559-68-4 206559-69-5
206559-70-8 206559-71-9 206559-72-0 206559-76-4
RL: TEM (Technical or engineered material use); USES (Uses)
(laminatable backing substrates containing fluoro compds. for improved toner flow)
- IT 9003-18-3, Butadiene-acrylonitrile **copolymer** 9003-55-8,
Styrene-butadiene **copolymer** 9003-56-9, Butadiene-acrylonitrile-
styrenecopolymer 24937-78-8, Ethylene-vinyl acetate **copolymer**
24980-58-3, Acrylic acid-vinyl acetate **copolymer** 25037-78-9,
Ethylene-vinyl chloride **copolymer**
RL: TEM (Technical or engineered material use); USES (Uses)
(**latex**; laminatable backing substrates containing fluoro compds.
for improved toner flow)
- IT **7631-86-9**, Colloidal **silica**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(laminatable backing substrates containing fluoro compds. for improved toner flow)
- L75 ANSWER 9 OF 12 HCA COPYRIGHT 2004 ACS on STN
125:89461 Recording paper and method of its preparation. Kuroyama, Yoshihiro;
Ohtani, Teiichi; Endo, Shoichi (Nippon Paper Industries Co., Ltd., Japan).
Eur. Pat. Appl. EP 711672 A2 19960515, 10 pp. DESIGNATED STATES: R:
DE, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1995-307928
19951107. PRIORITY: JP 1994-298977 19941108.
- AB The title recoding paper comprises a support paper coated on one side with
a recording layer and a method for its preparation The recording layer
comprises 60.95% of a pigment and 40-5% of a water-based binder and having
a thickness of 3-30 μm ; wherein the surface roughness by ten point
height on the recording layer surface is from 1-4 μm , the specular
glossiness of the recording layer surface at 75° according to JIS
P8142 is from 70-100%, and the part extending to the depth of at least 3
 μm below the top surface has a hole distribution curve having at least
one peak showing an average pore diameter of 0.1-1.0 μm and a height of
0.1-1.0 mL/g with respect to pore volume when measured with a porosimeter of
mercury intrusion type. A paper was coated with a **composition** containing
CaCO₃, casein, styrene-butadiene latex, and additives to give a recording
paper.
- IC ICM B41M005-00
ICS G03G007-00
- CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 42
- IT 9002-89-5, **Poly(vinyl alcohol)** 9004-32-4,
Carboxymethyl cellulose 9004-62-0, **Hydroxyethyl
cellulose** 9005-25-8D, **Starch**, oxidized or esterified
or cationized
RL: TEM (Technical or engineered material use); USES (Uses)
(binder; recording paper and method of its preparation)
- IT 9003-20-7, **Poly(vinyl acetate)**
RL: TEM (Technical or engineered material use); USES (Uses)
(emulsion, binder; recording paper and method of its preparation)
- IT 9003-55-8, Butadiene-styrene **copolymer**
RL: TEM (Technical or engineered material use); USES (Uses)
(**latex**, binder; recording paper and method of its preparation)

- IT **7631-86-9, Silica**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(pigment; recording paper and method of its preparation)
- IT **7631-86-9, Silica**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(pigment; recording paper and method of its preparation)
- L75 ANSWER 10 OF 12 HCA COPYRIGHT 2004 ACS on STN
- 96:8213 Organic pigments for coatings. Spence, Gavin Gary (Hercules Inc. , USA). Fr. Demande FR 2467913 A1 19810430, 40 pp. (French). CODEN: FRXXBL. APPLICATION: FR 1979-25793 19791017.
- AB Pigments usefull in coatings on paper are prepared by grafting 100 parts vinyl compound onto 1-25 parts **water-soluble** anionic or **nonionic polymer** with reduced sp. **viscosity** (1M NaCl, 25°) 0.1-2.5. Thus, adding 3500 g styrene, 80 g (NH4)2S2O8 in 400 g H2O, and 2200 g 8% aqueous 92:8 acrylamide-acrylic acid polymer (**viscosity** of a 12.5% solution 1286 cP at 26°) over 3 h to 2250 g H2O stirred at 80-95° gave a 46.8% **latex** of graft **polymer** [27083-59-6]. A 55% aqueous **composition** of this latex 10, clay 90, poly(vinyl acetate) 16, and Na CM-cellulose 0.3 part was coated (6.51 g/m2) on paper with a force of 22.7 kg and calendered 4 times at 71° and 26,787 kg/m to give paper with Sheffield leveling 26, opacity 87.3, 75° gloss 69.2, and IGT **ink** discharge 0.82, 0.66, and 0.58 in 30, 60, and 90 s, resp.
- IC D21H003-38; C09D003-00; C09D011-00
- CC 42-6 (Coatings, Inks, and Related Products)
Section cross-reference(s): 43
- IT Polymerization
(graft, of vinyl compds. on **water-soluble** polymers)
- L75 ANSWER 11 OF 12 HCA COPYRIGHT 2004 ACS on STN
- 72:45105 Water base paints. Gibsen, Kenneth F. (Kelco Co.). U.S. US 3481889 19691202, 6 pp. (English). CODEN: USXXAM. APPLICATION: US 1966-562092 19660701.
- AB Dripless, water-base paints contain a latex or rubberlike binder, a pigment, an aqueous vehicle for the pigment and binder, a pseudoplastic heteropoly saccharide hydrophilic colloid (I), and a water-soluble alginate. Thus, a I was prepared by the action of the bacterium Xanthomonas campestris on an aqueous medium containing glucose (II) 3, distillers' dry sols. 0.5, K2HPO4 0.5, and MgSO4.7H2O 0.1%. A solution of 5 parts I, which contained mannose, II, K glucuronate, and acetyl radicals, in 230 parts H2O was mixed with **polyethylene glycol** 3, **polyethylene glycol** mono(alkylphenyl) ether 1.5, water-dispersible lecithin 3, TiO2 (Ti Pure R-901) 225, and com. clay extender 100 parts. A 20% solution of Na-phenylphenate (Dowicide A) 12, diethylene glycol monoethyl ether 16, and ethylene glycol 16 parts were added to this dispersion, and the **mixture** was blended with 378 parts com. **poly(vinyl acetate)** emulsion (Flexibond 800) to give a paint with good application characteristics. The addition of Na alginate (Keltex P) increased the wet edge, and flow and leveling properties. The addition of 1 lb/gal of I to the pigment grind assisted greatly in the dispersion of the pigment. Styrene-butadiene latex emulsion (Gen-Flo 67), **poly(vinyl acetate)** latex emulsion (Resyn 12K55), acrylic latex emulsion (Rhoplex AC-22), and vinyl-acrylic **copolymer latex** emulsion (CL-222) were also used as binders. Na hexametaphosphate, preservative (Metasol 57), defoaming agent (Nopco 1719B, Nopco NDW, Nopco NXZ), kaolin (Hydrite Flat "D," Glo max LL), CaCO3

pigment (Duramite), finely divided pyrogenic **silica** (Cab-O-Sil M-5), BaSO₄ extender (Barytes 10-X-R), Ph Hg oleate (Nildew OL-30), hexylene glycol, BuOCH₂CH₂OAc, and nonionic metallic soap emulsion (Colloid 581B) were also used in similar paints. Colloids produced by Xanthomonas species other than X. campestris were suitable for use when added in somewhat larger quantities. The paints prepared had good hiding power with non-sag characteristics, a pseudoplastic or thixotropic body, were easily prepared, and were relatively stable to pH drift.

IC C09D
NCL 260017400
CC 42 (Coatings, Inks, and Related Products)

L75 ANSWER 12 OF 12 HCA COPYRIGHT 2004 ACS on STN

61:77451 Original Reference No. 61:13531f-h,13532a-b High-gloss **latex** paints. Becker, John C., Jr.; Bress, John H. (Celanese Corp. of America). US 3150110 19640000, 6 pp. (Unavailable). APPLICATION: US 19580214.

AB High-gloss coatings are formed by pigmented, aqueous **latex** paints containing $\geq 10\%$ by weight of pigment free of hydrophobic coatings and a polymer of vinyl acetate, if no pigment particles are $< 1 \mu$ in diameter and no polymer particles are $< 0.5 \mu$ in diameter. The preferred pigment is futile TiO₂, but others, such as carbon black, kaolin clays, Hansa Yellow G, Toluidene Red, chrome yellow, chrome green, Pigment Green R, may be used. Preparation consists of mixing the pigment with a H₂O-soluble nonionic surface-active agent, a H₂O dispersible pigment wetting agent, a H₂O-soluble thickener, and if desired, a H₂O-soluble anionic pigment dispersant or K₂CO₃, to raise the pH, after which the paste is reduced by the **latex** and solvents. Other ingredients, such as antifoam or antiblocking agents or fungicides, may also be included. Thus, a poly(vinyl acetate) homopolymer **latex** (I) was prepared from vinyl acetate monomer (II) 53, hydroxyethyl cellulose (III) 0.606, nonylphenyl polyethylene glycol ether (IV) 0.20, reaction product (V) of polypropylene glycol with ethylene **oxide** (VI) (V containing 10-20% VI) 1.60, a similar product (VII) containing 80-90% VI 0.40, Na dodecylbenzenesulfonate paste (63% concentration) (VIII) 0.30, K₂S₂O₈ 0.16, NaHCO₃ 0.012, and H₂O 43.722 parts by weight. A **copolymer latex** (IX) was prepared from II 42.4, di-Bu fumarate monomer 10.6, III 0.606, IV 0.20, V 1.80, VII 0.40, VIII 0.30, K₂S₂O₈ 0.16, NaHCO₃ 0.012, and H₂O 43.522 parts by weight. In both cases, polymerization took place over a 5-hr. period at 60-80° and final temperature 90°, after which I was adjusted to a **viscosity** of 1200 cp. by the addition of H₂O and IX to 2200 cp., solids being 55% in both. A paint was prepared from a 20% concentrate of Na salts of alkylnaphthalenesulfonic acids 8, IV 3, soybean lecithin 2, K₂CO₈ 1, rutile TiO₂ 100, chrome green dispersion 40, 2% 4000-cp. Me cellulose solution 25, and H₂O 24 parts by weight, the H₂O being added gradually during the addition of pigment. After mixing as a heavy paste for 20 min., 2 parts of antifoam agent was added, the **mixture** dispersed on a 3-roll mill and let down with diethylene glycol monoethyl ether 40, I (adjusted to pH of 7.0 with 25% K₂CO₃ solution) 500, and IX (adjusted to pH of 7.0 with 25%, K₂CO₃ solution) 330 parts. The paint weighed 10.0 lb./gal., had a 55% solid content and a **viscosity** in Krebs units of 65, and gave a 60° gloss of 82.

NCL 260017000
CC 52 (Coatings, Inks, and Related Products)
IT Paint
(from vinyl acetate polymers, fine-particle pigment-high glossy **latex**)
IT Ethers

(of glycols (polyethylene) with nonylphenol, vinyl acetate
polymer latex paints containing surfactant)
IT Surface-active substances
(paints from vinyl acetate **polymers** containing **nonionic**
)
IT Glycols, polyethylene, nonylphenyl ether
(vinyl acetate **polymer latex** paints containing
surfactant)
IT 25155-19-5, Naphthalenesulfonic acid
(alkyl derivs., Na salts, paints from vinyl acetate **polymer**
latex containing emulsifier)
IT 25989-00-8, Fumaric acid, dibutyl ester, polymer with vinyl acetate
(pigment-high glossy **latex** paints from)
IT 75-21-8, Ethylene **oxide**
(reaction products of, with polypropylene glycols, vinyl acetate
polymer latex paints containing surfactant)
IT 107926-62-5, Phenol, nonyl-, pyroborate
(reaction products with ethylene **oxide**, vinyl acetate
polymer latex paints containing)
IT 9004-34-6, Cellulose
(vinyl acetate **polymer latex** paints containing
emulsifier)

=> FILE WPIX

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>>> THE DISPLAY LAYOUT HAS BEEN CHANGED TO ACCOMODATE THE
NEW FORMAT GERMAN PATENT APPLICATION AND PUBLICATION
NUMBERS. SEE ALSO:
<http://www.stn-international.de/archive/stnews/news0104.pdf> <<<

=> D L119 1-14 ALL

L119 ANSWER 1 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-673178 [64] WPIX
DNN N2003-537553 DNC C2003-183797
TI **Inkjet recording element** for use in
ink printing comprises laminate adhesion promoting **polymer**
inner layer comprising, e.g. polyvinylpyrrolidone.
DC A11 A14 A25 A97 G05 P73 P75 T04
IN ROMANO, C E; TEEGARDEN, D M
PA (EAST) EASTMAN KODAK CO
CYC 3
PI GB 2385015 A 20030813 (200364)* 25 B41M005-00
US 2003157277 A1 20030821 (200364) B32B003-00
JP 2003260868 A 20030916 (200370) 13 B41M005-00
ADT GB 2385015 A GB 2002-29298 20021217; US 2003157277 A1 US 2002-68827
20020206; JP 2003260868 A JP 2003-28094 20030205
PRAI US 2002-68827 20020206
IC ICM B32B003-00; B41M005-00
ICS B41J002-01
AB GB 2385015 A UPAB: 20031006
NOVELTY - An **ink recording element** comprises
a support, e.g. resin-coated paper, having a hydrophilic absorbing layer,
a laminate adhesion promoting polymer inner layer and a
hydrophilic overcoat polymer layer.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an
ink printing method comprising applying fluid **ink**
droplets on an **inkjet recording element** in
an image-wise manner.
USE - For use in **ink** printing.
ADVANTAGE - The invention has excellent image quality, less
differential gloss and better laminate adhesion.
Dwg.0/0
FS CPI EPI GMPI
FA AB
MC CPI: A12-W07F; G02-A05C; G05-F03
EPI: T04-G02E

L119 ANSWER 2 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2003-539651 [51] WPIX
DNN N2003-427922 DNC C2003-146223
TI **Recording substrate** for **inkjet** printing,
comprises cellulosic substrate and coatings of varying
compositions formed on substrate.
DC A18 A23 A25 A97 E19 F09 G05 P75 T04
IN BRETON, M P; MACKINNON, D N; MALHOTRA, S L; WONG, R W
PA (XERO) XEROX CORP
CYC 1
PI US 6444294 B1 20020903 (200351)* 23 B41M005-00
ADT US 6444294 B1 US 2000-627245 20000727
PRAI US 2000-627245 20000727
IC ICM B41M005-00
AB US 6444294 B UPAB: 20030808
NOVELTY - A **recording substrate** has coating (I)
comprising cold-water-soluble **hydrophilic** binder **polymer**
, **ink** spreading/**ink** wetting agent, cationic
dye mordant, lightfastness-imparting agent, filler and biocide,

coating (II) comprising hot-water/alcohol-soluble material and phosphonium salt, and coating (III) comprising binder polymer, antistatic agent, lightfastness-imparting agent, filler and biocide.

DETAILED DESCRIPTION - A **recording substrate** comprises a cellulosic substrate having surface (I), and surface (II) opposite to surface (I). Coating (I) is present in contact with surface (I), coating (II) is present in contact with coating (I), and coating (III) is present in contact with surface (II). Coating (I) comprises cold-water-soluble **hydrophilic binder polymer**, **ink spreading/ink wetting agent**, **cationic dye** mordant, lightfastness-imparting agent, filler and optional biocide. Coating (II) comprises hot-water-soluble or alcohol-soluble material and phosphonium salt. Coating (III) comprises binder polymer with a glass transition temperature of -50 to 50 deg. C, antistatic agent, lightfastness-imparting agent, filler and optional biocide.

An INDEPENDENT CLAIM is included for printing process which involves incorporating an **ink composition** into an **inkjet** printing apparatus and causing droplets of the **ink** to be ejected in an imagewise pattern onto the **recording substrate**.

USE - For **inkjet** printing (claimed).

ADVANTAGE - The **recording substrate** is suitable for use in hot melt and acoustic **inkjet** printing processes. The **recording substrate** enables generation of images with good waterfastness, lightfastness, optical density, low edge raggedness, low intercolor bleed, minimum showthrough, reduced substrate curling and scratch resistance. The **recording substrate** enables generation of glossy images with a look and feel simulating those obtained with **silver halide** technology. The **recording substrate** minimizes the problems associated with substrate feeding through paper path of the printing apparatus.

Dwg.0/0

FS CPI EPI GMPI

FA AB; DCN

MC CPI: A12-W07F; E05-G02; E05-G03A; E07-D04A; E31-N05D; E31-P03; E34-C02; E34-D01; E34-D03; E35-C; E35-K02; E35-L; F05-A06B; G02-A05C; G05-F03
EPI: T04-G02E

L119 ANSWER 3 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-014449 [01] WPIX

DNN N2003-010467 DNC C2003-003574

TI **Ink** jet printing, involves loading printer with image-receiving layer comprising binder and cationic **polymer** particles and with **ink** comprising water-soluble anionic **dye**.

DC A97 G05 P75 T04

IN CHEN, T; LAWRENCE, K B; WANG, Y

PA (EAST) EASTMAN KODAK CO

CYC 28

PI US 6423398 B1 20020723 (200301)* 8 B41M005-00

EP 1226960 A2 20020731 (200301) EN B41M005-00

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

JP 2002326445 A 20021112 (200305) 10 B41M005-00

ADT US 6423398 B1 US 2001-770122 20010126; EP 1226960 A2 EP 2002-75110
20020114; JP 2002326445 A JP 2002-15343 20020124

PRAI US 2001-770122 20010126

IC ICM B41M005-00

ICS B41J002-01; C08F212-08; C08F212-14; C08F220-58

AB US 6423398 B UPAB: 20030101
NOVELTY - **Ink** jet printing comprises loading an **ink** jet printer with **ink**-receptive elements having an image-receiving layer comprising a binder and cationic polymer particles containing ethylenically unsaturated monomer(s) containing a trialkylammonium salt; and loading the printer with an **ink** jet **ink composition** comprising water, a humectant and a water-soluble anionic **dye**.

DETAILED DESCRIPTION - **Ink** jet printing comprises:

(a) providing an **ink** jet printer that is responsive to digital data signals;

(b) loading the printer with **ink**-receptive elements comprising a support having an image-receiving layer comprising a binder and cationic polymer particles containing ethylenically unsaturated monomer(s) containing a greater than 4C trialkylammonium salt;

(c) loading the printer with an **ink** jet **ink composition** comprising water, a humectant and a water-soluble anionic **dye**; and

(d) printing on the image-receiving layer using the **ink** jet **ink** in response to the digital data signals.

USE - For producing images to an image-**recording element** in response to digital signals.

ADVANTAGE - The invention improves the light stability, waterfastness, gloss and density of a printed image containing an **ink** jet **ink** containing a water-soluble anionic **dye** and a cationic receiver.

Dwg.0/0

FS CPI EPI GMPI

FA AB; GI

MC CPI: A12-W07F; G02-A04A; G05-F03

EPI: T04-G02C; T04-G02E

L119 ANSWER 4 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2002-064417 [09] - WPIX

DNN N2002-047849 DNC C2002-018880

TI Inkjet **recording medium** for inkjet **recording** and printing, comprises ink absorption layer(s) containing mesoporous **silica** and/or organic binder, provided on support.

DC A14 A25 A97 G05 P75 T04

PA (ASAHI) ASAHI KASEI KOGYO KK

CYC 1

PI JP 2001270239 A 20011002 (200209)* 8 B41M005-00

ADT JP 2001270239 A JP 2001-8029 20010116

PRAI JP 2000-7925 20000117

IC ICM B41M005-00

ICS B41J002-01

AB JP2001270239 A UPAB: 20020208

NOVELTY - An inkjet **recording medium** comprises at least one ink absorption layer containing mesoporous **silica** and/or organic binder, provided on a support.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for coating liquid for inkjet **recording medium**, which is formed from ink absorption layer component, and a solvent.

USE - Used as paper, sheet, film and cloth, for inkjet recording and printing.

ADVANTAGE - The inkjet **recording medium** excels in ink absorbability, image quality, durability, image preservability, light resistance and water resistance.

Dwg.0/0
FS CPI EPI GMPI
FA AB
MC CPI: A12-W07F; G05-F03
EPI: T04-G02E

L119 ANSWER 5 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2001-581531 [65] WPIX
DNN N2001-433234 DNC C2001-172329
TI Media coating, demonstrating water-fastness following **ink** jet printing, comprises cationically modified **silica**, cationically modified clay and binder.
DC A18 A97 F06 F09 G05 P75 T04
IN BRANHAM, K D; SNOWDEN, H S
PA (KIMB) KIMBERLY-CLARK WORLDWIDE INC; (BRAN-I) BRANHAM K D; (SNOW-I) SNOWDEN H S
CYC 95
PI WO 2001053107 A2 20010726 (200165)* EN 18 B41M005-00
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001036492 A 20010731 (200171) B41M005-00
US 2002004121 A1 20020110 (200208) B41M005-00
EP 1254029 A2 20021106 (200281) EN B41M005-00
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR
KR 2002071948 A 20020913 (200311) B41M005-00
MX 2002006683 A1 20021001 (200370) B41M005-00
JP 2004500260 W 20040108 (200410) 36 B41M005-00
US 6699537 B2 20040302 (200417) B41M005-00
ADT WO 2001053107 A2 WO 2001-US2003 20010119; AU 2001036492 A AU 2001-36492
20010119; US 2002004121 A1 Provisional US 2000-177074P 20000119, US
2001-766262 20010119; EP 1254029 A2 EP 2001-908647 20010119, WO
2001-US2003 20010119; KR 2002071948 A KR 2002-709230 20020718; MX
2002006683 A1 WO 2001-US2003 20010119, MX 2002-6683 20020704; JP
2004500260 W JP 2001-553134 20010119, WO 2001-US2003 20010119; US 6699537
B2 Provisional US 2000-177074P 20000119, US 2001-766262 20010119
FDT AU 2001036492 A Based on WO 2001053107; EP 1254029 A2 Based on WO
2001053107; MX 2002006683 A1 Based on WO 2001053107; JP 2004500260 W Based
on WO 2001053107
PRAI US 2001-766262 20010119; US 2000-177074P 20000119
IC ICM B41M005-00
ICS B41J002-01; C09D123-08; C09D131-04; D06P005-00
AB WO 200153107 A UPAB: 20011108
NOVELTY - A media coating, demonstrating water-fastness following **ink** jet printing, comprises a cationically modified **silica**, a cationically modified clay and a binder.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
(1) a method of coating a substrate by applying the coating; and
(2) a coated substrate formed by applying the coating
composition.
USE - As a coating for paper, film or other substrate that is receptive to common, aqueous **ink** and jet **inks**.
ADVANTAGE - The formed images have superior quality to those formed on uncoated substrates. The printed images are water-fast, eliminating

deterioration on repeated exposure to water.

Dwg.0/0

FS CPI EPI GMPI

FA AB

MC CPI: A11-B05; A12-W07F; F03-E01; F03-F31; F03-F33; F05-A06B; G05-F03
EPI: T04-G02

L119 ANSWER 6 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2001-574827 [65] WPIX

DNN N2001-428685 DNC C2001-171219

TI Binder **composition** for **ink**-accepting layer in
ink-jet recording comprises cationic **polymer**, inorganic
filler and polyhydric metal.

DC A97 G02 G05 P75 T04

PA (ASAH) ASAHI KASEI KOGYO KK

CYC 1

PI JP 2001199153 A 20010724 (200165)* 9 B41M005-00

ADT JP 2001199153 A JP 2000-10499 20000119

PRAI JP 2000-10499 20000119

IC ICM B41M005-00

ICS B41J002-01

AB JP2001199153 A UPAB: 20011108

NOVELTY - A binder **composition** for an **ink** accepting
layer formed directly or indirectly on at least one surface of a support
is composed of cationic polymer, inorganic filler and polyhydric metal.

USE - Used in **ink**-jet recording.

ADVANTAGE - The **composition** has excellent light resistance,
water resistance and coloring properties. Moreover, it has excellent
ink absorbency and stain properties.

Dwg.0/0

FS CPI EPI GMPI

FA AB

MC CPI: A08-R01; A12-W07F; G05-F; G05-F03
EPI: T04-G02E

L119 ANSWER 7 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-319976 [28] WPIX

DNN N2000-240176 DNC C2000-097123

TI Overcoat layer useful for photographic quality **inkjet**
recording media, comprises a vinyl **latex**
polymer having units from a **hydrophilic** vinyl
monomer, a **hydrophobic** vinyl **monomer** and a
cationic **monomer**.

DC A18 A23 A25 A97 G05 P75 T04

IN BURNS, E G; DICILLO, J; SHAW-KLEIN, L J

PA (EAST) EASTMAN KODAK CO

CYC 27

PI EP 995610 A2 20000426 (200028)* EN 13 B41M005-00

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI

JP 2000118130 A 20000425 (200031) 13 B41M005-00

US 6089704 A 20000718 (200037) B41M005-00

EP 995610 B1 20031203 (200403) EN B41M005-00

R: DE FR GB

DE 69913290 E 20040115 (200413) B41M005-00

ADT EP 995610 A2 EP 1999-203279 19991007; JP 2000118130 A JP 1999-296741
19991019; US 6089704 A US 1998-175132 19981019; EP 995610 B1 EP
1999-203279 19991007; DE 69913290 E DE 1999-613290 19991007, EP

1999-203279 19991007

FDT DE 69913290 E Based on EP 995610

PRAI US 1998-175132 19981019

IC ICM B41M005-00

ICS B41J002-01

AB EP 995610 A UPAB: 20000613

NOVELTY - An overcoat layer for an **inkjet recording medium** comprise: (a) a vinyl **latex polymer** (I) comprising units from hydrophilic and **hydrophobic** vinyl **monomers** and a cationic monomer; (b) a support; and (c) a hydrophilic image-recording layer.

DETAILED DESCRIPTION - An **inkjet recording medium** comprises a support bearing a hydrophilic image-recording layer, on which is an overcoat layer comprising a vinyl **latex polymer** of formula (I):

A = a **hydrophilic** vinyl **monomer**;

B = a **hydrophobic** vinyl **monomer**;

C = a cationic monomer;

x = 1-80 mole%;

y = 10-80 mole%; and

z = 2-20 mole%.

An INDEPENDENT CLAIM is also included for an **ink jet** printing process comprising applying liquid **ink** droplets in an image-wise manner to the claimed **recording element**.

USE - As an **ink**-receiver in **inkjet** printing (claimed), e.g. in printing photographic quality images.

ADVANTAGE - The material will retain an **inkjet** image (without unwanted transfer of the **dyes** to other surfaces) and it provides **inkjet** printed images with high optical densities and excellent image quality. It also provides the higher gloss and fast drying required in photographic quality printing without using high **viscosity** coating **compositions**. The lower **viscosity** coating **compositions** allow the use of higher coating speeds and provide cost savings compared to the use of solution polymers.

Dwg.0/0

FS CPI EPI GMPI

FA AB

MC CPI: A12-W07F; G05-F03

EPI: T04-G02E

L119 ANSWER 8 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-160865 [14] WPIX

DNN N2000-120012 DNC C2000-050278

TI A coating **composition** for e.g. **inkjet** papers and **recording medium** comprises a **nonionic latex polymer**, porous inorganic **oxide** and a water soluble **polymer**.

DC A11 A14 A25 A82 A97 G02 G05 P75 T04

IN CHAPMAN, D M

PA (GRAC) GRACE & CO-CONN W R; (GRAC) GRACE & CO W R

CYC 84

PI WO 2000002736 A1 20000120 (200014)* EN 45 B41M005-00

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB
GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA

UG UZ VN YU ZA ZW
 AU 9949730 A 20000201 (200028) B41M005-00
 NO 2001000123 A 20010308 (200123) B41M000-00
 EP 1098776 A1 20010516 (200128) EN B41M005-00
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI
 ZA 2001000272 A 20011031 (200173) 50 B41M000-00
 CN 1315905 A 20011003 (200205) B41M005-00
 KR 2001071790 A 20010731 (200208) C09D011-08
 MX 2001000124 A1 20010501 (200227) B41M005-00
 JP 2002520494 W 20020709 (200259) 41 D21H019-64
 AU 768412 B 20031211 (200404) B41M005-00
 EP 1098776 B1 20040317 (200421) EN B41M005-00
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 DE 69915631 E 20040422 (200428) B41M005-00
 ADT WO 2000002736 A1 WO 1999-US15328 19990708; AU 9949730 A AU 1999-49730
 19990708; NO 2001000123 A WO 1999-US15328 19990708, NO 2001-123 20010108;
 EP 1098776 A1 EP 1999-933738 19990708, WO 1999-US15328 19990708; ZA
 2001000272 A ZA 2001-272 20010110; CN 1315905 A CN 1999-810290 19990708;
 KR 2001071790 A KR 2001-700289 20010108; MX 2001000124 A1 MX 2001-124
 20010108; JP 2002520494 W WO 1999-US15328 19990708, JP 2000-558983
 19990708; AU 768412 B AU 1999-49730 19990708; EP 1098776 B1 EP 1999-933738
 19990708, WO 1999-US15328 19990708; DE 69915631 E DE 1999-615631 19990708,
 EP 1999-933738 19990708, WO 1999-US15328 19990708
 FDT AU 9949730 A Based on WO 2000002736; EP 1098776 A1 Based on WO 2000002736;
 JP 2002520494 W Based on WO 2000002736; AU 768412 B Previous Publ. AU
 9949730, Based on WO 2000002736; EP 1098776 B1 Based on WO 2000002736; DE
 69915631 E Based on EP 1098776, Based on WO 2000002736
 PRAI US 1998-92139P 19980709
 IC ICM B41M000-00; B41M005-00; C09D011-08; D21H019-64
 ICS C08L005-00; C08L029-04; C08L031-04; C08L089-04; D21H019-42;
 D21H019-58
 AB WO 200002736 A UPAB: 20000320
 NOVELTY - A coating **composition** comprises the nonionic
latex, water-soluble **polymer** and a porous inorganic
oxide having a pore volume in the range of 0.6 - 3 cc/g. The
 inorganic **oxide** further possesses a cationic charge. The
composition has a solid content of at least 20 weight% and a
 Brookfield viscosity of 5000 centipoise or less.
 USE - For **inkjet** papers and **recording**
medium including a substrate in which the coating is present in
 the range of 5-10 g/m² (claimed).
 ADVANTAGE - As the coating has a higher solid content (greater than
 20%), so it is not only less viscous, but also imparts properties that
 meet the print performance needs for **recording medium**
 in the **inkjet** area.
 Dwg.0/6
 FS CPI EPI GMPI
 FA AB
 MC CPI: A12-W07F; G02-A05C; G05-F; G05-F03
 EPI: T04-G02

L119 ANSWER 9 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 AN 2000-051932 [04] WPIX
 DNC C2000-013305
 TI Preparation of **ink composition** by modified emulsion
 aggregation process for **inkjet** printing on substrates such as
 plain paper, **silica** coated paper, fabrics, plastics,

polymer films.

DC A18 A97 G02 T04
 IN BRETON, M P; HOPPER, M A; KMIECIK-LAWRYNOWICZ, G E; ONG, B S; PATEL, R D
 PA (XERO) XEROX CORP
 CYC 1
 PI US 5977210 A 19991102 (200004)* 8 C08F002-26
 ADT US 5977210 A US 1995-380550 19950130
 PRAI US 1995-380550 19950130
 IC ICM C08F002-26
 AB US 5977210 A UPAB: 20000124

NOVELTY - Monomer, water, surfactant, initiator are mixed and polymerized by emulsion **polymerization** to form **latex**. A dispersion containing pigment, water and 0.1-0.75 weight % (weight%) of cationic surfactant is blended to the latex. Subsequently, to the obtained **mixture** anionic surfactant is added to stabilize the aggregated particles.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for printing process which involves incorporating the obtained **ink** into the **inkjet** apparatus and ejecting **ink** dropwise on an image wise pattern to form images on the substrate.

USE - For **inkjet** printing in continuous stream, bubble jet, thermal **inkjet** printing on substrates such as plain paper, Xerox 4024 paper, bond paper GILBERT, 25% or 100% cotton bond paper, **silica** coated paper, transparent materials, fabrics, plastics and polymer films.

ADVANTAGE - The **ink composition** has good thermal stability, smear resistance, water fastness, fast drying, light fastness, improved print quality and jetting characteristics. The clogging of **ink** in the print heads do not occur. The extra anionic surfactant added further prevents the growth of aggregated particles even when the jet operates at higher temperatures. When the **ink composition** is heated, vaporization of water occurs and increases the concentration of additional surfactants, thus enhancing the optical density of the image (claimed).

Dwg.0/0

FS CPI EPI
 FA AB
 MC CPI: A07-B; A08-S05; A08-S06; A10-B03; A12-W07D; G02-A04A; G05-F03
 EPI: T04-G02C

L119 ANSWER 10 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 AN 1990-356088 [48] WPIX
 DNN N1990-271984 DNC C1990-154656
 TI Metallic, water-borne automotive paint base coat - has good appearance, contains aluminium flake pigments in acrylic latex.
 DC A82 G02 M13 P42
 IN ANDERSON, J L; MCCLANAHAN, C; MCCLANAHAN, C J
 PA (BADI) BASF CORP; (BADI) BASF AG
 CYC 16
 PI EP 399427 A 19901128 (199048)*
 R: AT BE CH DE ES FR GB GR IT LI LU NL SE
 CA 2030931 A 19920528 (199233)# C09D157-00
 JP 04234464 A 19920824 (199240)# 12 C09D005-38
 EP 399427 B1 19940202 (199405) EN 14 C09D005-38
 R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
 DE 69006393 E 19940317 (199412) C09D005-38
 ES 2052097 T3 19940701 (199429) C09D005-38
 ADT EP 399427 A EP 1990-109580 19900521; CA 2030931 A CA 1990-2030931

19901127; JP 04234464 A JP 1990-409751 19901210; EP 399427 B1 EP
1990-109580 19900521; DE 69006393 E DE 1990-606393 19900521, EP
1990-109580 19900521; ES 2052097 T3 EP 1990-109580 19900521
FDT DE 69006393 E Based on EP 399427; ES 2052097 T3 Based on EP 399427
PRAI US 1989-355959 19890523
REP AT 381499; DE 3321180; US 4346149
IC ICM C09D005-38; C09D157-00
ICS B05D001-36; B05D005-06; B05D007-24; C09D133-06; C09D167-00;
C09D201-00
AB EP 399427 A UPAB: 19930928
An automotive paint base **compsn.** (I) is claimed comprising: (a)
an Al base, pref. comprising a water reducible, solvent-borne acrylic,
polyester or alkyd resin having an acid number of 15-65 based on solids and a
solids content of 50-75 weight%; 4-30 weight% metallic pigment; 25-55 weight%
total
solids, 35-50 weight% total water-miscible organic solvent, and 5-35 weight%
total binder; (b) a neutralisation base pref. comprising 0.1-15 weight% NH3,
5-25 weight% of the acrylic, polyester or alkyd used in (a); 5-25 weight% total
solids and having a pH of 7.5-10.0; (c) a clear resin base, pref.
comprising an acrylic latex having 20-60 weight% total solids and a Tg of
10-50 deg.C.; 1.0-12.0 weight% water-miscible solvent; 1.0-8.0 weight%
hydrophilic colloidal **silica** (partic. having a particle size of
1.0-10,000 millimicrons) and 20-60 weight% total solids; (d) a pigmented
base, pref. comprising an acrylic latex having 20-60 weight% solids and a Tg
of 10-50 deg.C.; 0-25 weight% water-miscible solvent; 0.1-45.0 weight%
inorganic/organic pigments or **dyestuffs** and 5-60 weight% total
solids; and (e) a surfactant base, pref. containing 0.1-5.0 weight% surfactant
in
water. Opt. (I) may be overcoated with a clear coat **compsn.**,
pref. a polyurethane **compsn.**. A method for forming (I) is also
claimed comprising mixing (a) and (b) and then adding (c), (d) and (e).
The pigment in the Al base is pref. selected from a solvent-borne Al flake
(partic. treated for water stability) and a mica flake. The surfactant in
the surfactant base is pref. selected from **polymeric non**
-ionic fluorocarbon surfactants containing 2-25 weight% F, having an
average mol. weight of 5000-50,000, and having 30-70 ethylene **oxide**
linkages by weight of surfactant.
ADVANTAGE - (I) are water-borne and thus comply with regulations on
volatile organic cpds.. (I) has good appearance.
0/0
FS CPI GMPI
FA AB
MC CPI: A04-F01A1; A05-E01D1; A05-E08; A07-B02; A08-E01; A08-S02; A10-E21;
A12-B01E; A12-B01H; A12-T05; G02-A02C; G02-A02E; M13-H05; M14-C

L119 ANSWER 11 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1990-249745 [33] WPIX
DNC C1990-107971
TI Preparation of rubbery **polymer** - by adding **nonionic**
surfactant to **polymer latex**, flowing into coagulation
bath containing dissolved metal salt.
DC A12
PA (JAPG) NIPPON ZEON KK
CYC 1
PI JP 02173002 A 19900704 (199033)*
JP 2632570 B2 19970723 (199734) 5 C08C001-14
ADT JP 02173002 A JP 1988-328695 19881226; JP 2632570 B2 JP 1988-328695
19881226

FDT JP 2632570 B2 Previous Publ. JP 02173002

PRAI JP 1988-328695 19881226

IC C08C001-14

ICM C08C001-14

AB JP 02173002 A UPAB: 19930928

A preparation of a rubbery polymer is carried out by adding nonionic surfactant into a **polymer latex** and flowing down the latex into a coagulation bath, in which a metal salt is dissolved, in mfg. a rubbery polymer from a **polymer latex** obt'd. by emulsion polymerisation.

The rubbery polymer is pref. a acrylonitrile-butadiene copolymer, styrene-butadiene copolymer, acrylic rubber and modified polymers obt'd. by adding functional gp., e.g. epoxy gp., hydroxyl gp., carboxyl gp., amino gp., etc. to those **polymers**. The **nonionic** surfactant is pref. ethylene **oxide**, propylene **oxide** adduct of alkylphenol-formalin condensate. The metallic salt is pref. sodium chloride, calcium chloride, magnesium chloride, aluminium chloride, sodium sulphate, magnesium sulphate, and aluminium sulphate. The inorganic acid is pref. sulphuric acid, hydrochloric acid, phosphoric acid and silicic acid. The ratio of surfactant used is metallic salt and inorganic acid is 0.01-5 pts. weight of nonionic surfactant, and 0.5-50 pts. weight of metallic salt or inorganic acid to 100 pts. weight of rubbery polymer.

USE/ADVANTAGE - Good crumbs with proper size, porosity and good drying characteristics by changing used ratio or weight ratio of nonionic surfactant added to **polymer latex** and metallic salt or inorganic acid dissolved in coagulation bath, further used amount of metallic salt or inorganic acid can be reduced by using nonionic surfactant.

0/0

FS CPI

FA AB

MC CPI: A07-B; A08-S; A10-G01A

L119 ANSWER 12 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1985-044757 [08] WPIX

DNC C1985-019465

TI Salt free coagulation of **polymer latices** - with simultaneous anti-ageing stabilisation of the **polymer**, by adding an acid after addition of lignin and a non-cationic dispersing agent.

DC A12 A60

IN ARNOLD, M; BERTRAM, M; FISCHER, F; JOST, R; LANGE, S; STRICKER, J; WIENHAUS, O

PA (BUNA) CHEM WERK BUNA VEB

CYC 1

PI DD 214613 A 19841017 (198508)* 11

ADT DD 214613 A DD 1983-249227 19830328

PRAI DD 1983-249227 19830328

IC C08C001-15

AB DD 214613 A UPAB: 19930925

A process for salt-free coagulation of **polymer latices** with simultaneous protection of the polymer against ageing, the latex containing emulsifiers and dispersing agents such as resin- and/or fatty acids and/or alkali salts of acid sulphuric acid esters such as alkyl sulphates and/or sulphonate gp.-containing cpds. such as alkylarylsulphonates or naphthalenesulphonates and the alkali salt of naphthalene sulphonic acid-formaldehyde condensn. prods., comprises adding an acid such as H2SO4 or acetic acid in conventional coagulation units, with addition to the latex before or during coagulation of a combination of (i) 0.1-5 % (w.r.t.

polymer) of lignin as a solution or dispersion and (ii) a dispersing agent such as a copolymer of maleic anhydride with mono-and/or diolefins such as ethylene, propylene, isobutene, methylpent-1-ene, butadiene-1,3, 2-methylbutadiene-1,3 and/or vinyl monomers such as vinyl acetate, vinyl ether, styrene, etc., and which may be partially or completely in the acid amide form of formula (I).

In (I) $n = 1-3$; $R_1 = H, OH, \text{ or } 1-6C \text{ alkyl}$; $R_2 = H, 1-12C \text{ alkyl, cycloaliphatic gp., aromatic gp., NH or CO}$; $R_3 = H, OH, COOH \text{ or } -NR_4R_5$; $R_4 \text{ and } R_5 = H, \text{ alkyl or phenyl}$; $R_6 = H, NHR, NH_4^+ \text{ or } Me^+$; and/or opt. in acid imide form, in solid form or as a dispersion or as an aqueous neutral, basic or ammoniacal solution, and/or other non-cationic dispersing agents or other water-soluble **polymers** such as **non-ionic alkylene oxide** adducts, cellulose ethers and carboxymethylcellulose in amts. of 10 power -4 to 5%.

ADVANTAGE - Addition of the lignin and dispersing agent to the latex prior to coagulation with acid allows coagulation to be carried out without the addition of salt, and gives a polymer which is stabilised against ageing without affecting polymer quality or vulcanisation rate.

0/0

FS CPI

FA AB

MC CPI: A03-C02; A07-B04; A10-G01; A12-W12C

L119 ANSWER 13 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1984-078879 [13] WPIX

DNN N1984-058804 DNC C1984-033881

TI Filled paper used as newspaper, art paper etc. - obtd. from pulp, inorganic fibre, filler and carboxy-modified diene **copolymer latex**.

DC A97 F09

PA (ASAH) ASAH CHEM IND CO LTD

CYC 1

PI JP 59030998 A 19840218 (198413)* 6

ADT JP 59030998 A JP 1982-140967 19820816

PRAI JP 1982-140967 19820816

IC D21H003-78

AB JP 59030998 A UPAB: 19930925

Compsn. consisting of 30-75 weight% water-dispersible fibre (e.g. chemical pulp, mechanical pulp, semi-chemical pulp, etc.) mixed with an inorganic fibre, a synthetic fibre, etc., as needed, 20-60 weight% inorganic filler (e.g. **Ti oxide, silica, Zn oxide**, clay, Ca carbonate, etc.), and 0.5-20 weight% carboxy-modified diene **copolymer latex** (e.g. carboxy-modified styrene-butadiene copolymer, etc.) as a binder, together with, as needed, a cellulose derivative, an antioxidant, a fungicide, a pH regulator, a water-soluble organic **dye**, a water-dispersible **colourant**, **starch**, a **nonionic** acrylamide **copolymer**, a cationic emulsifier, etc., is made into paper.

The filled papers have high strength (e.g. tensile strength, etc.) and are easily produced at low cost. The filled papers are effectively used in high- or medium-grade paper newspaper, art base paper, gypsum board base paper, wall paper, etc.

0/0

FS CPI

FA AB

MC CPI: A04-B01; A12-W06B; F05-A06C; F05-A06D

L119 ANSWER 14 OF 14 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 1974-77347V [44] WPIX
TI Polyvinylidene chloride latex containing phenol alkylene **oxide**
adduct - to reduce heat seal temperature of films, etc..
DC A14 A82 G02 P73
PA (DOWC) DOW CHEM CO
CYC 6
PI US 3843583 A 19741022 (197444)*
BE 814317 A 19741029 (197446)
SE 7403165 A 19751006 (197544)
JP 50128739 A 19751011 (197549)
GB 1463612 A 19770202 (197705)
CA 1016286 A 19770823 (197736)
PRAI US 1973-377482 19730709
IC B29C000-00; B32B027-30; B32B029-06; C08F001-13; C08F047-16; C08L027-08
AB US 3843583 A UPAB: 19930831
The heat-seal temperature of films and coatings obtd. from **latex**
containing a **copolymer** of $\geq 80\%$ vinylidene chloride, 0.1-5% of an
ionic water-soluble **monomer** (I) and opt. another monomer is
lowered (e.g., from 160 degrees to 120 degrees C) by incorporating into
the monomer charge or into the latex 0.5-5wt.%, based on copolymer, of a
cpd. of formula (II): where R1 is H or alkyl; R2 is alkyl, R1 and R2
contain a total of 8-20C; Y is H or Me; n is 6-40 and R3 is H or Me. (I)
is pref. of formula: R-Z-Q-SO3-M+ where R is (alpha-substd.)vinyl; Z is
-CO-, -COO-, -OCO-, -CO-N; -Q- is 1-8C alkylene or arylene with valence
bonds attached to different C atoms; M circled positive is a cation
selected from free acids, alkali metal salts, and **ammonium**,
sulphonium, and **quat.ammonium** salts. The opt. monomer
is (meth)acrylic acid, (meth)acrylonitrile, hydroxyethyl(m)ethacrylate,
hydroxypropylacrylate, acrylate, acrylamide, lower alkyl and
dialkylacrylamides, acrolein or methyl vinyl ketone.
FS CPI GMPI
FA AB
MC CPI: A04-E07; A08-M; A10-E08; G02-A05

=> D L122 1-7 TI

L122 ANSWER 1 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
TI Topical personal care **composition** for skin and/or hair,
comprises preset amount of inorganic film-forming colloid and adhesive
elastomeric **polymer** having specific glass transition
temperature, and carrier.

L122 ANSWER 2 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
TI Detackification of oversprayed paint involves dosing water with a
composition comprising aluminum sulfate and **polymer**
consisting of cationic mer units, anionic mer units and acrylamide mer
units.

L122 ANSWER 3 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
TI Synthetic resin **composition** for deodorizing amine malodor
comprises aqueous medium, surfactant, **polymer latex**
and transition metal/transition metal compound supported **silica**
gel and activated carbon .

L122 ANSWER 4 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
TI Production of free-flowing rubber powder involves mixing alkoxy-silane
with aqueous filler suspension, mixing some of the **mixture** with

rubber latex, adding the rest, acidifying, and isolating the precipitate.

L122 ANSWER 5 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

TI Wallboards of reduced density and increased strength are produced from a **composition** comprising gypsum, a **latex polymer** and a **non-ionic polymer**.

L122 ANSWER 6 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

TI Biodegradable **polyethylene glycol** ether foam suppressants - for **polymer** emulsions and dispersions.

L122 ANSWER 7 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

TI Coagulation of **polymeric latices** to eliminate fine.

=> D L122 1-3,5-7 ALL

L122 ANSWER 1 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2002-362038 [39] WPIX

DNC C2002-102406

TI Topical personal care **composition** for skin and/or hair, comprises preset amount of inorganic film-forming colloid and adhesive elastomeric **polymer** having specific glass transition temperature, and carrier.

DC A96 B05 D21

IN ALWATTARI, A A

PA (PROC) PROCTER & GAMBLE CO

CYC 95

PI WO 2002015873 A2 20020228 (200239)* EN 39 A61K007-48

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU
SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2001085201 A 20020304 (200247) A61K007-48

ADT WO 2002015873 A2 WO 2001-US26233 20010822; AU 2001085201 A AU 2001-85201 20010822

FDT AU 2001085201 A Based on WO 2002015873

PRAI US 2000-643491 20000822

IC ICM A61K007-48

ICS A61K007-02; A61K007-025; A61K007-032; A61K007-06

AB WO 200215873 A UPAB: 20020621

NOVELTY - A topical personal care **composition** safe and effective for modifying the appearance of skin or hair, comprises 0.1-60 weight% (weight%) of inorganic film-forming colloid having glass transition temperature (Tg) of more than 25 deg. C, 0.1-70 weight% of an adhesive elastomeric polymer having Tg of less than 40 deg. C and 10-99.8 weight% of dermatologically acceptable carrier.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the following:

(1) A cosmetic kit useful for improving appearance of skin or hair, comprising:

(1) a first component (I) containing 0.1-60 weight% of inorganic colloid sol having Tg of more than 25 deg. C containing dispersion of inorganic colloid in a polar carrier and 10-90 weight% of carrier; and

(2) a second component (II) containing 0.1-70 weight% of adhesive elastomeric polymer having Tg of less than 40 deg. C, and 10-90 weight% of a

carrier.

ACTIVITY - Dermatalogical.

MECHANISM OF ACTION - None given.

USE - As topical skin care **composition**, such as facial skin cosmetics, eye cosmetics, lip cosmetics, scalp hair-styling aids, facial hair styling aids, moisturizers, wrinkle soothing serums, lotions, mascaras, skin facial masks, eye **gels**, eye creams, lip **gels**, lip creams, cosmetics and/or foundations for improving appearance of skin, texture, color and/or firmness and styling hair (claimed), especially human facial hair (e.g. eyebrows, eyelashes), modifying scalp hair, beard and/or mustache, improving chronological aging, wrinkles, skin lines, crevices, bumps, large pores (associated with adnexal structures, such as sweat gland ducts, sebaceous glands, or hair follicles), unevenness or roughness, loss of skin elasticity (loss and/or inactivation of functional skin elastin), sagging (puffiness in eye area and jowls), loss of skin firmness, skin tightness and skin recoil from deformation, discoloration (under-eye circles), blotching, sallowness, hyperpigmented skin regions, such as age spots and freckles, keratoses, abnormal differentiation, hyperkeratinization, elastosis, collagen breakdown, and other histological changes in the stratum underkeratinization, elastosis, collagen breakdown, and other histological changes in the stratum corneum, dermis, epidermis, skin vascular system (e.g. telangiectasia or spider vessels), and underlying tissues, especially those proximate to the skin. Also useful for prophylactic and/or therapeutical regulation of skin physical conditions, especially keratinous tissue condition in human and mammal, caused due to internal and/or external factors e.g. environmental damage, radiation exposure, menopausal status, stress, diseases etc.

ADVANTAGE - The film forming inorganic colloid and adhesive elastomeric polymer of the **composition** provides controlled delivery of physical stress on skin or hair with simultaneous adhesion and flexibility which is acute and sustained. Also provides texture and firming effect (e.g., smoothing hair, curling eyelashes etc.) when applied to skin. Also provides visible skin texture discontinuities (wrinkles, fine lines, under eye bags and dark circles, sagging skin, scars/marks, dimples, pores, stretch marks, roughness, skin surface, frown lines, expression lines, rhytides, blemishes, photo-damage, crevices, and unevenness). The adhesive elastomeric polymer protects the inorganic colloid film from fracturing or breaking and adheres the colloid to skin or hair and physical stress creation caused by drying polymer **mixture**.

Dwg.0/0

FS CPI
FA AB; DCN
MC CPI: A12-V04A; A12-V04C; B03-A; B03-H; B04-C03; B05-A01B; B05-A03B;
B05-B01B; B05-B02C; B07-D04C; B10-D03; B14-N17; B14-R01; B14-R02;
D08-B01; D08-B05; D08-B09A1; D08-B09A3

L122 ANSWER 2 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2001-006205 [01] WPIX

CR 1989-100946 [14]; 1990-066841 [09]; 1990-107423 [14]; 1994-091473 [11]

DNC C2001-001338

TI Detackification of oversprayed paint involves dosing water with a **composition** comprising aluminum sulfate and **polymer** consisting of cationic mer units, anionic mer units and acrylamide mer units.

DC A18 A97 D15 J01

IN WALDMANN, J J

PA (PORJ) POLYMER RES CORP AMERICA

CYC 1

PI US 6136200 A 20001024 (200101)* 14 B01D021-01

ADT US 6136200 A CIP of US 1985-749343 19850627, CIP of US 1987-96681
19870915, Cont of US 1989-409396 19890919, Cont of US 1991-763880
19910920, Div ex US 1993-47624 19930415, US 1994-208593 19940311

FDT US 6136200 A CIP of US 4891422, Div ex US 5294352

PRAI US 1989-409396 19890919; US 1985-749343 19850627;
US 1987-96681 19870915; US 1991-763880 19910920;
US 1993-47624 19930415; US 1994-208593 19940311

IC ICM B01D021-01

AB US 6136200 A UPAB: 20001230

NOVELTY - The detackification method involves dosing water with a **composition** comprising polymer and aluminum sulfate. The polymer consists of cationic mer units selected from dimethylaminoethylmethacrylate sulfuric acid salt and/or dimethylaminoethylmethacrylate methylchloride quaternary salt; ethylenically unsaturated anionic mer units; and acrylamide mer units. The intrinsic **viscosity** of the polymer is 1.2-3.8.

DETAILED DESCRIPTION - The detackification method of oversprayed paint which comes in contact with water of waste water system in a paint spray operation, involves dosing the water with a **composition** comprising polymer and 0.2-10 weight pts of aluminum sulfate as octadecahydrate. The polymer consists of 10-50 mol.% of dimethylaminoethylmethacrylate sulfuric acid salt and/or dimethylaminoethylmethacrylate methyl chloride quaternary salt; 1-10 mol% of ethylenically unsaturated anionic mer units; and 40-89 mol% of acrylamide mer units. The intrinsic **viscosity** of the polymer is 1.2-3.8.

USE - For detackification of paint and for removing residual paint and metals present in spray paint booth water (claimed).

ADVANTAGE - The inorganic-organic polymer adduct alloys or organic polymer adduct alloys are high performing, highly effective, products for waste water treatment of water-borne waste including paints and lacquers. The inorganic-organic polymer adduct alloy can be produced in full yield having a velocity less than 20000 cps. The method render the paint globules relatively non-sticky and allows them to be skimmed from the surface of treatment solution into filter bags. The sludges produced by the products have low water content and dewater fastly. The clarified effluent can be recycled to the spray booth.

Dwg.0/0

FS CPI

FA AB; GI

MC CPI: A04-D04A2; A08-S02; A10-E; A12-W11F; D04-A01P; D04-B06D; J01-D

L122 ANSWER 3 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2000-401900 [35] WPIX

DNC C2000-121740

TI Synthetic resin **composition** for deodorizing amine malodor comprises aqueous medium, surfactant, **polymer latex** and transition metal/transition metal compound supported **silica gel** and activated carbon .

DC A18 A25 A97 D22 F06

IN AKIHIRO, M; HIDEKI, O; KAZUHIRO, F; MASAKO, F; SEIJI, O; SHIGEYOSHI, M; SHIROU, U; TOMIKO, M; YOSHIO, Y; FUKUMOTO, K; FURUTA, M; MATSUYAMA, A; MIURA, S; MOURI, T; OHNO, H; ONODA, S; UEDA, S; YAMADA, Y

PA (DNIN) DAINIPPON INK & CHEM INC; (TOYO-N) TOYODA BOSHOKU CORP; (TOYO-N) TOYODA BOSHOKU KK; (TOYW) TOYOTA CHUO KENKYUSHO KK; (TOYT) TOYOTA JIDOSHA

KK
CYC 27
PI EP 1008623 A1 20000614 (200035)* EN 26 C08K009-02
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI
JP 2001049133 A 20010220 (200114) 19 C08L101-16
US 6503962 B1 20030107 (200306) A61L003-00
EP 1008623 B1 20040324 (200422) EN C08K009-02
R: BE DE FR GB
DE 69915780 E 20040429 (200429) C08K009-02
ADT EP 1008623 A1 EP 1999-124488 19991208; JP 2001049133 A JP 1999-241313
19990827; US 6503962 B1 US 1999-457470 19991209; EP 1008623 B1 EP
1999-124488 19991208; DE 69915780 E DE 1999-615780 19991208, EP
1999-124488 19991208
FDT DE 69915780 E Based on EP 1008623
PRAI JP 1999-241313 19990827; JP 1998-350239 19981209;
JP 1999-152083 19990531
IC ICM A61L003-00; C08K009-02; C08L101-16
ICS C08K003-10; C08K003-36
AB EP 1008623 A UPAB: 20000725
NOVELTY - A synthetic resin **composition** for deodorizing amine
malodor comprises an aqueous medium, surfactant, **polymer**
latex and filler comprising a transition metal supported
silica gel having a transition metal/transition metal
compound supported **silica gel** carrier dispersed in an
aqueous medium by the surfactant.
USE - The resin **composition** is useful for deodorizing
amine, such as trimethylamine, malodors in buildings and automobiles.
ADVANTAGE - Applying the resin **composition** and drying it on
a fabric such as a carpet or fabric covering material, the deodorizing
function in the residence rooms and vehicle compartment can be improved.
The transition metal/transition metal compound performs extremely well as
a Lewis acid, it forms a complex with a Lewis base having unpaired
electrons, such as amines and ammonia.
Dwg.0/6
FS CPI
FA AB
MC CPI: A08-F01; A08-M04; A12-D; A12-T; D09-A; F03-C02; F03-C03

L122 ANSWER 5 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1999-580290 [49] WPIX
DNN N1999-428452 DNC C1999-168780
TI Wallboards of reduced density and increased strength are produced from a
composition comprising gypsum, a **latex polymer**
and a **non-ionic polymer**.
DC A18 A25 A93 L02 Q44
IN JOBBINS, R M
PA (RHOD) RHODIA INC
CYC 84
PI WO 9947470 A1 19990923 (199949)* EN 33 C04B028-14
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SL SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE
GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG
MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG
UZ VN YU ZA ZW
AU 9930045 A 19991011 (200008) C04B028-14
EP 1064237 A1 20010103 (200102) EN C04B028-14

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 US 6171388 B1 20010109 (200104) C04B028-14
 EP 1064237 B1 20020807 (200259) EN C04B028-14
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 DE 69902447 E 20020912 (200268) C04B028-14
 ES 2178407 T3 20021216 (200306) C04B028-14
 ADT WO 9947470 A1 WO 1999-US5566 19990316; AU 9930045 A AU 1999-30045
 19990316; EP 1064237 A1 EP 1999-911396 19990316, WO 1999-US5566 19990316;
 US 6171388 B1 Provisional US 1998-78353P 19980317, US 1999-266432
 19990311; EP 1064237 B1 EP 1999-911396 19990316, WO 1999-US5566 19990316;
 DE 69902447 E DE 1999-602447 19990316, EP 1999-911396 19990316, WO
 1999-US5566 19990316; ES 2178407 T3 EP 1999-911396 19990316
 FDT AU 9930045 A Based on WO 9947470; EP 1064237 A1 Based on WO 9947470; EP
 1064237 B1 Based on WO 9947470; DE 69902447 E Based on EP 1064237, Based
 on WO 9947470; ES 2178407 T3 Based on EP 1064237
 PRAI US 1998-78353P 19980317; US 1999-266432 19990311
 IC ICM C04B028-14
 ICS C04B011-00; E04C002-04
 ICI C04B038:10; C04B024:26, C04B028-14; C04B024:26, C04B028-14, C04B038:10
 AB WO 9947470 A UPAB: 19991124
 NOVELTY - A **composition** (C) comprising gypsum, synthetic
latex polymers and surfactants has a density less than
 0.64 g/cm³ and provides wallboards satisfying industry standards.
 DETAILED DESCRIPTION - A **composition** of matter comprising:
 a) gypsum (CaSO₄.2H₂O); b) one or more naturally occurring or synthetic
latex polymers; and (c) one or more non-ionic
 surfactants; where the **composition** has a density less than 0.64
 g/cm³ and where the wallboard produced from the **composition**
 satisfies the criteria of ASTM Methods C-36 and C-473.
 An INDEPENDENT CLAIM is also included for a process (P) for producing
 lightweight gypsum building materials comprising the steps of: (a)
 providing an amount of stucco (CaSO₄. 1/ one half H₂O); (b) adding 30 to
 90 parts of water per 100 parts stucco; (c) adding as a binder a naturally
 occurring or synthetic latex (to the stucco and water) to provide 0.25-10
 parts of latex per 100 parts stucco; (d) adding 2-30 parts of a non-ionic
 surfactant per 100 parts of **latex polymer** to disperse
 the latex; (e) adding a foaming agent to components (a) to (d); and (f)
 mixing the components to enable the gypsum building material to set.
 USE - Manufacture of building interior walls.
 ADVANTAGE - The set material has improved strength combined with
 reduced density.
 Dwg. 0/0
 FS CPI GMPI
 FA AB
 MC CPI: A12-R01A; A12-R07; L02-A02; L02-D07A
 L122 ANSWER 6 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
 AN 1987-057568 [09] WPIX
 DNC C1987-023976
 TI Biodegradable **polyethylene glycol** ether foam
 suppressants - for **polymer** emulsions and dispersions.
 DC A25 A60 E17
 IN HELD, U; HOFER, R; MEFFERT, A; PIORR, R; WEBEMUND, B
 PA (HENK) HENKEL KGAA
 CYC 14
 PI DE 3530301 A 19870226 (198709)* 6
 EP 213518 A 19870311 (198710) GE
 R: AT BE CH DE FR GB IT LI LU NL SE

JP 62049939 A 19870304 (198715)
US 4792582 A 19881220 (198902) 6
EP 213518 B 19900711 (199028)
R: AT BE CH DE FR GB IT LI NL SE
DE 3672540 G 19900816 (199034)
JP 06104190 B2 19941221 (199504) 5 B01F017-42
ADT DE 3530301 A DE 1985-3530301 19850824; EP 213518 A EP 1986-111348
19860816; JP 62049939 A JP 1986-199884 19860825; US 4792582 A US
1986-895077 19860811; JP 06104190 B2 JP 1986-199884 19860825
FDT JP 06104190 B2 Based on JP 62049939
PRAI DE 1985-3530301 19850824
REP A3...8826; EP 124815; FR 1551599; FR 2515639; No-SR.Pub
IC B01D019-04; B01F017-42; C08F002-30; C08J003-06; C08K005-06
AB DE 3530301 A UPAB: 19930922
Use of cpds. of formula
R1-O-(CH2CH2O)n-R2 (I)
R1 = straight or branched 8-18C alkyl or alkenyl; R2 = 4-8C alkyl, n
= 7-30 in aqueous **polymer** dispersions and **latexes** as
biodegradable, foam-suppressant emulsifiers and/or emulsion stabilisers is
claimed. Pref. (I) cpds. are (a) already totally or partly present in the
emulsion polymerisation system and/or (b) added to the finished
polymer dispersion as **non-ionic**
(co)emulsifiers.
(I) is claimed where n = 8-20, especially 8-16 and R2 = n-butyl; (I)
together with **polyethylene glycol** ethers with an OH
number of 900-1200 obtd.by addition of 4-20 pts.weight ethylene **oxide**
and 1 pts.weight glycerine and etherification of the free OH gps. with 4-8C
alkyl halides, in a ratio of (I):polyglycerine cpd. of approx. 1:1-9:1.
ADVANTAGE - **Polymer latexes** and dispersions are
stabilised against e.g. coagulation due to transport, storage and filling
stresses. The polyglycol ethers (I) are also acid and alkali resistant.
0/0
FS CPI
FA AB; DCN
MC CPI: A08-S05; A08-S06; A10-E08A; E10-H01D

L122 ANSWER 7 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1968-60392P [00] WPIX
TI Coagulation of **polymeric latices** to eliminate fine.
DC A00
PA (MONS) MONSANTO CO
CYC 1
PI US 3249569 A (196800)*
PRAI US 1962-219748 19620827
AB US 3249569 A UPAB: 19930831
Coagulation of **polymeric latices** to eliminate fine
particles.
Coagulation of a latex by mixing an electrolyte into the
molten latex in the presence of 0.01-0.1% of a water-soluble
non-ionic polymer. The **latex** is a
graft polymer of a monomer of
styrene, aralkylstyrene, vinyl naphthalene, methacrylonitrile,
C1-4 alkyl acrylate or methacrylate, etc. on a rubbery polymer of
conjugated 1,3-diene (butadiene, isoprene, piperylene,
chloroprene or **mixtures**). the polyvalent electrolyte
(coagulant)
can be MgSO4, Al2(SO4)3, CaCl2, etc. The non-ionic electrolyte
is a polymer of polyethylene **oxide**, polypropylene **oxide**

polybutylene **oxide**, a copolymer of ethylene **oxide** and propylene
oxide, a cellulose ether, **polyvinyl alcohol**
polyallyl alcohol,
vinyl alkyl ether polymer, vinyl lactam polymer or an acrylamide polymer.

FS CPI

FA AB

MC CPI: A07-B; A08-M

FILE 'APOLLIT' ENTERED AT 15:57:48 ON 28 JUN 2004

=> D L163 1-2 ALL

L163 ANSWER 1 OF 2 APOLLIT COPYRIGHT 2004 FIZ KA on STN

AN 2004:2282 APOLLIT

TI Synthesis and characterization of nanosized polypyrrole-polystyrene **composite** particlesAU Xu, Xiao-Jun; Gan, Leong-Ming; Siow, Kok-Siong; Wong, Ming-Keong
(Department of Materials Science and Engineering, University of Pennsylvania, 3231 Walnut Street, Philadelphia (US); Institute of Materials Research and Engineering, 3 Research Link, Singapore (SG); Department of Chemistry, National University of Singapore, 3 Science Drive 3, Singapore (SG))SO Journal of Applied Polymer Science (2004) v. 91(2), p. 1360-1367,
<http://dx.doi.org/10.1002/app.13305>; SICI: 0021-8995(20040115)91:2<1360::AID-APP13305>3.0.TX;2-B, With 6 figs., 3 tabs., 26 refs.

CODEN: JPYIAA ISSN: 0021-8995

DT Journal

LA English

AB Nanosized polypyrrole-polystyrene (PPy-PS) **composite** particles were synthesized by the **polymerization** of pyrrole on PS nanoparticles in the presence of FeCl₃. The PS nanoparticles were prepared from microemulsion **polymerizations** using the cationic nonpolymerizable surfactant cetyltrimethylammonium bromide (CTAB), the **nonionic polymerizable** surfactant #omega#-methoxy poly(ethylene **oxide**)₄₀ undecyl #alpha#-methacrylate (PEO-R-MA-40), or the cationic **polymerizable** surfactant #omega#-acryloyloxyundecyltrimethylammonium bromide (AUTMAB). For the latexes stabilized by CTAB, the resulting PPy-PS **composite** particles exhibited relatively poor colloidal stability and the pressed pellets exhibited relatively low electrical conductivities (#propor to#10⁻⁷-10⁻³ S cm⁻¹). However, for the **latexes** stabilized by **polymerizable** surfactants, the resulting PPy-PS **composite** particles exhibited relatively good colloidal stability and relatively high conductivities (#propor to#10⁻⁵-10⁻¹ S cm⁻¹). The effect of **polymerizable** surfactants on the colloidal stability of **composite** particles and the conducting mechanism of the **composites** are discussed. copyright 2003 Wiley Periodicals, Inc. J Appl Polym Sci 91: 1360-1367, 2004 (orig.)

CC *1121 Styrene polymers

1188 Polymers with nitrogen or oxygen

5400 Reinforced plastics, composites

7110 Morphology

CT AMMONIUM COMPOUNDS; CATIONS; COLLOIDS; **COMPOSITES**;

CONDUCTIVITY, ELECTRICAL; CONSTITUTION; ELECTRON MICROSCOPY; EMULSION
POLYMERIZATION; ESCA; INORGANIC COMPOUNDS; IR SPECTROSCOPY; IRON;
LATEX; NANOSTRUCTURES; PARTICLE SIZE; PELLETS; POLYETHYLENE **OXIDE**
; POLYPYRROLE; POLYSTYRENE; SURFACTANTS; SYNTHESIS

L163 ANSWER 2 OF 2 APOLLIT COPYRIGHT 2004 FIZ KA on STN
AN 1995:967 APOLLIT
TI Synthesis of **nonionic** flocculants by gamma irradiation of
mixtures of **polyacrylamide** and poly(ethylene
oxide)
Synthese nichtionischer Koaguliermittel durch Gammabestrahlung von
Mischungen aus Polyacrylamid und Polyethylenoxid
AU Deng, Y.; Pelton, R.; Xiao, H.; Hamielec, A.
SO J. Appl. Polym. Sci. (1994) 54(6), p.805-813, 9p,6f,4t,321
CODEN: JAPNAB ISSN: 0021-8995
DT Journal
LA English
AB Charakterisiert wird die Synthese von Pfropfcopolymeren aus
Polyacrylamid/Polyethylenoxid (PAM/PEO). Die Reaktionsbedingungen werden
durch Gammabestrahlung variiert, um eine Optimierung der Flokkulation
einer Polystyrol-**Latex** durch die **Copolymeren** zu
erreichen. Charakterisiert werden Einflüsse der Gammastrahlendosis, der
PEO-Kettenlaenge, des PEO/PAM-Verhaeltnisses und des Vernetzungsgrades
der **Copolymeren**. Die effektivste Flokkulation zeigt eine
Mischung von 1,2 Gew-% PAM (Molekulargewicht 5×10^6) und 0,94 Gew-%
PEO (Molekulargewicht 5000), gammabestrahlt mit 816 Krad. Das
resultierende **Copolymer** enthaelt 24 Gew-% PEO. Die Vernetzung
zu nichtloeslichen Gelen ist eine unerwuenschte Nebenreaktion, die mit
der Gammastrahlendosis zunimmt und bei PEO-Zugabe abnimmt. Die
effektivsten Koaguliermittel enthalten mehr als 15 Gew-% PEO mit
schwacher Vernetzung. Ebenfalls charakterisiert wird das Pfropfverhalten
eines Dreiblockcopolymeren, PEO-PPO-PEO, auf PAM bei Gammabestrahlung.
Trotz erfolgter Pfropfung lassen sich hiermit keine effektiven
Koaguliermittel erhalten.
CC *8138 Polymeric agents
1141 Acrylic polymers
1182 Polyethers
3832 Graft copolymers
CT BLOCK **COPOLYMERS**; BY-PRODUCTS; COAGULATION; CROSSLINKING;
DISPERSIONS; GAMMA RAYS; **GELS**; GRAFT **COPOLYMERIZATION**
; GRAFT **COPOLYMERS**; INITIATION BY IRRADIATION; INTENSITY;
MOLECULAR WEIGHT; **POLYACRYLAMIDE**; POLYETHYLENE **OXIDE**;
POLYMERIC REAGENTS; POLYPROPYLENE **OXIDE**; POLYSTYRENE;
YIELD
ST **polymeres** Flockungsmittel; Pfropf-PAM-PEO

=> FILE RAPRA

FILE 'RAPRA' ENTERED AT 15:58:38 ON 28 JUN 2004
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FILE LAST UPDATED: 16 JUN 2004 <20040616/UP>
FILE COVERS 1972 TO DATE

=> D L164 1 ALL

L164 ANSWER 1 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:902962 RAPRA FS Rapra Abstracts
TI SYNTHESIS AND CHARACTERIZATION OF NANOSIZED POLYPYRROLE-POLYSTYRENE
COMPOSITE PARTICLES.
AU Xiao-Jun Xu; Leong-Ming Gan; Kok-Siong Siow; Ming-Keong Wong
(Pennsylvania,University; Singapore,Institute of Materials Research &
Engineering; Singapore,National University)
SO Journal of Applied Polymer Science 91, No.2, 15th Jan.2004, p.1360-7
ISSN: 0021-8995
CODEN: JAPNAB
PY 2004
DT Journal
LA English
AB The synthesis of nano-sized polypyrrole-polystyrene **composite**
particles by ferric chloride catalysed **polymerisation** of
pyrrole on polystyrene (PS) nanoparticles, prepared by microemulsion
polymerisation using cationic or **non-ionic**
polymerisable or **non-polymerisable**
surfactants, is described. The **composites** and PS latexes were
characterised by TEM, elemental analysis, XPS, FTIR and conductivity
measurements, and the effects of **polymerisable** surfactants on
the properties of the **composite** particles are discussed. 26
refs.
CC 42C21; 43; 72233; 59A; 9912T; 91T; 992.10.T; 9922T; 981T
SC *KB; KF; KV; MJ; OB; UL; UC; UJ; UI
CT ANALYSIS; CATIONIC; CHARACTERISATION; CHARACTERIZATION; **COMPOSITE**
; DATA; ELECTRICAL CONDUCTIVITY; ELEMENTAL ANALYSIS; **EMULSION**
POLYMERISATION; FOURIER TRANSFORM INFRARED SPECTROSCOPY; FTIR; FTIR
SPECTROSCOPY; GRAPH; INSTITUTION; IR SPECTROSCOPY; LATEX; LATICES;
MICROEMULSION POLYMERISATION; **MICROEMULSION**
POLYMERIZATION; NANOPARTICLE; **NON-IONIC**;
NON-POLYMERISABLE; **NON-POLYMERIZABLE**; PHOTOELECTRON
SPECTROSCOPY; PLASTIC; **POLYMERISABLE**; **POLYMERISATION**;
POLYMERIZABLE; **POLYMERIZATION**; POLYPYRROLE;
POLYSTYRENE; POLYVINYL BENZENE; PS; **PYRROLE POLYMER**; SCANNING
ELECTRON MICROSCOPY; SPECTROSCOPY; **STYRENE POLYMER**; SURFACE
ACTIVE AGENT; SURFACTANT; SYNTHESIS; TABLES; TECHNICAL; TEM;
THERMOPLASTIC; TRANSMISSION ELECTRON MICROSCOPY; X-RAY PHOTOELECTRON
SPECTROSCOPY; X-RAY SPECTROSCOPY
NPT FERRIC CHLORIDE; IRON CHLORIDE; IRON HALIDE
SHR NANOCOMPOSITES, pyrrole **polymers**, PS, **composite**
nanoparticles, synthesis, PS **latexes**, microemulsion
polymerisation, surfactants, cationic, **non**
ionic, **polymerisable**, nonpolymerisable,
characterisation, morphology, **composition**, conductivity
GT SINGAPORE; USA

=> D L164 2-22 ALL

L164 ANSWER 2 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:860223 RAPRA FS Rapra Abstracts; Adhesives Abstracts
TI PREPARATION OF LATICES, INKS AND ADHESIVES FROM **POLYVINYL**
ACETATE AND ACRYLIC **COPOLYMERS**.
AU Glavchev I; Yordanova H; Draganov L (Sofia,University of Chemical
Technology & Metallurgy; DAL Ltd.)
SO Surface Coatings International Part B 85, No.B2, June 2002, p.139-41

ISSN: 1356-0751
PY 2002
DT Journal
LA English
AB **Latices** of PVAc, **copolymers** of vinyl acetate and acrylamide and **copolymers** of methyl methacrylate and butyl methacrylate were synthesised by free-radical **polymerisation** or **copolymerisation** using different **ionic** or **non-ionic** surfactants and protective colloids. The effects of the amount of surfactant, **copolymer composition** and quantity of **monomers** on the particle size of the latex were examined and the use of the latex obtained from the methyl methacrylate-butyl methacrylate **copolymer** as an ink on PP syringes and of the PVAc latex with various amounts of epoxy resin as an adhesive for wood evaluated. 7 refs.
CC 6121; 6A32; 6A1
SC *OB; QB
*ADAHM
CT **ACRYLAMIDE COPOLYMER; ADHESIVE; BLEND; BUTYL METHACRYLATE COPOLYMER; COLLOID; COMPANIES; COMPANY; COPOLYMER COMPOSITION; DATA; EPOXIDE RESIN; EPOXY RESIN; FREE RADICAL COPOLYMERISATION; FREE RADICAL POLYMERISATION; FREE-RADICAL COPOLYMERISATION; FREE-RADICAL COPOLYMERIZATION; FREE-RADICAL POLYMERISATION; FREE-RADICAL POLYMERIZATION; GRAPH; INK; INSTITUTION; IONIC; LATEX; LATICES; METHYL METHACRYLATE COPOLYMER; METHYLMETHACRYLATE COPOLYMER; NON-IONIC; PARTICLE SIZE; PLASTIC; POLYEPOXIDE; POLYMERISATION; POLYMERIZATION; POLYPROPENE; POLYPROPYLENE; POLYVINYL ACETATE; PP; PRINTING INK; PROTECTIVE COLLOID; PVA; PVAC; SURFACE ACTIVE AGENT; SURFACTANT; SYNTHESIS; SYRINGE; TECHNICAL; TEST; THERMOPLASTIC; THERMOSET; VINYL ACETATE POLYMER; WOOD**
SHR LATEX; INKS, printing; ADHESIVES, latex
SHA LATEX
GT BULGARIA; EASTERN EUROPE

L164 ANSWER 3 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:845534 RAPRA FS Rapra Abstracts
TI SYNTHESIS AND CHARACTERIZATION OF EPOXY-ACRYLATE **COMPOSITE** LATEX.
AU Guirong Pan; Limin Wu; Zhuqing Zhang; Dan Li (Fudan, University)
SO Journal of Applied Polymer Science 83, No.8, 22nd Feb.2002, p.1736-43
ISSN: 0021-8995
CODEN: JAPNAB
PY 2002
DT Journal
LA English
AB A waterborne epoxy-acrylate **composite** latex was synthesised by means of emulsion **polymerisation**. Increasing the concentration of the initiator (ammonium persulphate) and epoxy resin resulted in a decrease in the weight average molecular weight. The graft ratio increased with increasing initiator level and reduction of the epoxy resin concentration. Variations in the surfactant concentration (polyoxyethylene alkylphenyl ether ammonium sulphate or polyoxyethylene octylphenyl ether) had little effect on the weight-average molecular weight and the graft ratio. Increasing the initiator level caused an increase in the particle size, but increasing the surfactant and epoxy resin decreased the latex particle size. The epoxy segments in the

composite latex film tended to move to the mould-facing surface, whereas the acrylic-styrene **copolymer** components segregated near the air-facing surface. The blend **polymer** appeared to have a higher crosslink density than the **composite polymer**. 17 refs.

CC 43EA; 42C351A; 7241; 627; 6121; 6125; 72233; 9114; 9.11.2; 951; 966

SC *KV; KK; KB; OK; OB; OD; UC; UL; UG; UH

CT **ACRYLATE COPOLYMER; ACRYLIC ACID COPOLYMER;**

ACRYLIC ESTER COPOLYMER; ANIONIC; ATTENUATED TOTAL REFLECTANCE INFRARED SPECTROSCOPY; ATTENUATED TOTAL REFLECTANCE SPECTROSCOPY; ATTENUATED TOTAL REFLECTION SPECTROSCOPY; BLEND; BUTYL ACRYLATE COPOLYMER; CHARACTERISATION; CHARACTERIZATION; CHROMATOGRAPHY; COMPANIES; COMPANY; COMPOSITE; COMPOSITION; CONCENTRATION; CROSSLINK DENSITY; CROSSLINKING; DATA; DIFFERENTIAL THERMAL ANALYSIS; DMA; DSC; DYNAMIC MECHANICAL ANALYSIS; EMULSION POLYMERISATION; EMULSION POLYMERIZATION; EPOXIDE RESIN; EPOXY RESIN; FILM; FILMS; FOURIER TRANSFORM INFRARED SPECTROSCOPY; FTIR SPECTROSCOPY; GEL PERMEATION CHROMATOGRAPHY; GLASS TRANSITION; GLASS TRANSITION TEMPERATURE; GPC; GRAFT; GRAFT COPOLYMER; GRAFTING; GRAPH; INFRA-RED SPECTRA; INFRARED SPECTRA; INITIATOR; INSTITUTION; IR SPECTRA; IR SPECTROSCOPY; LATEX; LATICES; MECHANICAL PROPERTIES; MOLEC.WT.; MOLECULAR MASS; MOLECULAR WEIGHT; MORPHOLOGICAL PROPERTIES; MORPHOLOGY; NON-IONIC; PARTICLE SIZE; PLASTIC; POLYEPOXIDE; POLYMERISATION; POLYMERISATION MECHANISM ; POLYMERIZATION; POLYMERIZATION MECHANISM; PROPERTIES; RATIO; REACTION CONDITIONS; REACTION MECHANISM; SPECTRA; SPECTROSCOPY; STYRENE COPOLYMER; SURFACE ACTIVE AGENT; SURFACE COMPOSITION; SURFACTANT; SYNTHESIS; TABLES; TECHNICAL; TENSILE PROPERTIES; TENSILE STRENGTH; THERMOPLASTIC; THERMOSET; WATER-BORNE; WEIGHT AVERAGE MOLEC.WT.; WEIGHT AVERAGE MOLECULAR WEIGHT; WEIGHT-AVERAGE MOLEC.WT.

NPT AMMONIUM PERSULFATE; AMMONIUM PERSULPHATE

SHR EPOXY RESINS, graft **copolymers, composites, latex**, blends, emulsion **polymerisation**, molecular weight, morphological properties, mechanical properties, glass transition; **ACRYLIC COPOLYMERS**, graft **copolymers, composites, latex**, blends, emulsion **polymerisation**, molecular weight, morphological properties, mechanical properties, glass transition; **GRAFT COPOLYMERS**, epoxy resins, acrylic **copolymers, composites, latex**, blends, emulsion **polymerisation**, molecular weight, morphological properties, mechanical properties, glass transition; **COMPOSITES**, epoxy resins, acrylic **copolymers, graft copolymers, latex**, blends, emulsion **polymerisation**, molecular weight, morphological properties, mechanical properties, glass transition; **LATEX**, epoxy resins, acrylic **copolymers, graft copolymers, composites**, emulsion **polymerisation**, molecular weight, morphological properties, mechanical properties, glass transition; **BLENDS**, epoxy resins, acrylic **copolymers, graft copolymers, composites**, molecular weight, morphological properties, mechanical properties, glass transition; **EMULSION POLYMERISATION**, epoxy resins, acrylic **copolymers, graft copolymers, composites, latex**; **MOLECULAR WEIGHT**, epoxy resins, acrylic **copolymers, graft copolymers, composites, latex**, blends, morphological properties, mechanical properties, glass transition; **MORPHOLOGICAL PROPERTIES**, particle size, epoxy resins, acrylic

copolymers, graft copolymers, composites, latex, blends, molecular weight, mechanical properties, glass transition; MECHANICAL PROPERTIES, epoxy resins, acrylic copolymers, graft copolymers, composites, latex, blends, molecular weight, morphological properties, glass transition; GLASS TRANSITION, epoxy resins, acrylic copolymers, graft copolymers, composites, latex, blends, molecular weight, morphological properties, mechanical properties

GT CHINA
TN PHODAPEX CO436; IGEPAL CA897

L164 ANSWER 4 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:836514 RAPRA FS Rapra Abstracts
TI ROLE OF INITIATION IN THE SYNTHESIS OF **SILICA**/POLY(METHYL METHACRYLATE) NANOCOMPOSITE LATEX PARTICLES THROUGH EMULSION **POLYMERIZATION**.
AU Luna-Xavier J-L; Bourgeat-Lami E; Guyot A (Laboratoire de Chimie et Procédés de **Polymerisation**)
SO Colloid & Polymer Science 279, No.10, Oct.2001, p.947-58
ISSN: 0303-402X
CODEN: CPMSB6
PY 2001
DT Journal
LA English
AB **Silica**/PMMA nanocomposite latex particles were synthesised by emulsion **polymerisation** of methyl methacrylate under alkaline conditions using a **non-ionic** surfactant (nonyl phenol poly(oxyethylene)) and a cationic initiator (2,2'-azobis(2-amidinopropane) dihydrochloride, AIBA), an anionic initiator (potassium persulphate, KPS) or a **non-ionic** initiator (AIBN). A **silica** sol (average diameter 68 nm) was used as the seed. AIBA was adsorbed onto the **silica** surface via electrostatic interactions between the amidine group of AIBA with the silanolate groups on the **silica** surface. The other two initiators did not adsorb onto the **silica** under the reaction conditions used, but **polymerisation** occurred on the **silica** particles with all three initiators. When AIBA was used, up to 65 wt% of the total **polymer** formed was present at the **silica** surface compared with 40 wt% for KPS and 25 wt% for AIBN. By using a cationic initiator and controlling the pH of the suspension, the amount of free **polymer** could be decreased significantly. The mechanisms leading to the formation of the nanocomposite particles were discussed. 29 refs.
CC 42C35121; 627; 6121; 72233; 72222; 9.11
SC *KK; OK; OB; KB; UL
CT ADSORPTION; AMIDINE GROUP; ANALYSIS; ANIONIC; CALCULATION; CATIONIC; CHARACTERISATION; CHARACTERIZATION; CHEMICAL STRUCTURE; COATING; COMPANIES; COMPANY; **COMPOSITE**; **COMPOSITION**; DATA; ELECTRON MICROGRAPH; ELECTROSTATIC INTERACTION; ELEMENTAL ANALYSIS; **EMULSION POLYMERISATION**; **EMULSION POLYMERIZATION**; EQUATION; FLOW DIAGRAM; GRAPH; GRAVIMETRIC ANALYSIS; HETEROCOAGULATION; HYDROPHILIC; HYDROPHILICITY; INFRA-RED SPECTRA; INFRARED SPECTRA; INFRARED SPECTROPHOTOMETRY; INFRARED SPECTROSCOPY; INITIATION; INITIATOR; INSTITUTION; INTERACTION; IR SPECTRA; IR SPECTROMETRY; IR SPECTROSCOPY; IR SPECTRUM; LANGVIN EQUATION; LATEX; LATICES; MECHANISM; MOLEC.WT.; MOLECULAR INTERACTION; MOLECULAR MASS; MOLECULAR STRUCTURE; MOLECULAR WEIGHT; MOLECULAR WEIGHT DISTRIBUTION; MORPHOLOGICAL PROPERTIES; MORPHOLOGY; MWD; NANOCOMPOSITE; **NON-IONIC**; NONYLPHENYLPOLYOXYETHYLENE ETHER; PARTICLE; PH; PLASTIC; PMMA;

POLYMERISATION; POLYMERISATION INITIATOR;
POLYMERIZATION; POLYMERIZATION INITIATOR; POLYMETHYL
METHACRYLATE; PROPERTIES; REACTION; REACTION CONDITIONS; REACTION
MECHANISM; SEEDED POLYMERISATION; SEEDING; SOL; SURFACE;
SURFACE ACTIVE AGENT; SURFACE CHARGE; SURFACTANT; SYNTHESIS; TABLES;
TECHNICAL; TEM; TGA; THERMAL GRAVIMETRIC ANALYSIS; THERMOGRAVIMETRIC
ANALYSIS; THERMOPLASTIC; TRANSMISSION ELECTRON MICROSCOPY; VIBRATIONAL
SPECTROSCOPY

NPT AIBN; AZOBISAMIDINOPROPANE DIHYDROCHLORIDE; AZOBISISOBUTYRONITRILE;
METHYL METHACRYLATE; METHYLMETHACRYLATE; MMA; MONOMETHYL METHACRYLATE;
POTASSIUM PERSULFATE; POTASSIUM PERSULPHATE; SILANOLATE; **SILICA**
; SILICON DIOXIDE

SHR METHYL METHACRYLATE **POLYMERS, composites,**
nanocomposites, **latex,** emulsion **polymerisation,**
polymerisation initiators, morphological properties;
COMPOSITES, PMMA, silica, nanocomposites, latex
, emulsion **polymerisation, polymerisation** initiators,
morphological properties; **LATEX, PMMA, silica,**
composites, nanocomposites, emulsion polymerisation,
polymerisation initiators, morphological properties; **EMULSION**
POLYMERISATION, PMMA, silica, composites,
nanocomposites, **latex, polymerisation** initiators,
morphological properties; **POLYMERISATION INITIATORS, PMMA,**
silica, composites, nanocomposites, latex,
emulsion **polymerisation,** morphological properties;
MORPHOLOGICAL PROPERTIES, particles, **PMMA, silica,**
composites, nanocomposites, latex, emulsion
polymerisation, polymerisation initiators

GT EUROPEAN COMMUNITY; EUROPEAN UNION; FRANCE; WESTERN EUROPE

TN KLEBOSOL 30N50

L164 ANSWER 5 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN

AN R:820594 RAPRA FS Rapra Abstracts

TI **COMPOSITE** NATURAL RUBBER-POLYCHLOROPRENE LATEX PARTICLES
PRODUCED BY THE HETEROCOAGULATION TECHNIQUE.

AU Tangboriboonrat P; Buranabunya U (Mahidol University)

SO Colloid & Polymer Science 279, No.6, June 2001, p.615-20
ISSN: 0303-402X
CODEN: CPMSB6

PY 2001

DT Journal

LA English

AB **Composite** NR-based latex particles were prepared using the
heterocoagulation technique. A **non-ionic** surfactant
(Tween 80) whose molecules bore PEO was adsorbed on polychloroprene(CR)
latex particles and allowed to form complexes between PEO and indigenous
surfactant (protein-lipid) on the NR particle surface. The
heterocoagulated NR/CR-Tween particles produced were characterised by
particle size, zeta potential and Tg measurements and the data indicated
the presence of CR-Tween on the outer layer of the **composite**
polymer particles. The results were in good agreement with the
better oil resistance of films cast from heterocoagulated latex when
compared with that of the NR film. 22 refs.

CC 41C1; 42D14; 6121; 7

SC *OB; UA; KC; KO

CT ADSORPTION; CAST; CHEMICAL RESISTANCE; **CHLOROPRENE POLYMER;**
COAGULATION; COMPLEX; CR; DATA; **DIENE POLYMER; ELASTOMER;**
ETHYLENE OXIDE POLYMER; FILM; FILMS; GLASS TRANSITION

TEMPERATURE; GRAPH; HETEROCOAGULATION; INSTITUTION; LATEX; LATICES;
NATURAL RUBBER; NEOPRENE; **NON-IONIC**; NR; OIL RESISTANCE; OIL
RESISTANT; PARTICLE SIZE; PEO; POLYCHLOROPRENE; POLYDIENE;
POLYETHYLENE OXIDE; PROPERTIES; RUBBER; SURFACE ACTIVE AGENT;
SURFACTANT; SYNTHESIS; TABLES; TECHNICAL; TG; THERMAL PROPERTIES; ZETA
POTENTIAL

SHR NATURAL RUBBER, latex, coagulation; CHLOROPRENE **POLYMERS**,
latex, coagulation; **LATEX**, NR, chloroprene
polymers, coagulation

GT THAILAND

TN TWEEN 80

L164 ANSWER 6 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN

AN R:817659 RAPRA FS Rapra Abstracts

TI PREPARATION OF EPOXY RESIN/ACRYLIC **COMPOSITE LATEXES**
BY MINIEMULSION **POLYMERIZATION** METHOD.

AU Kawahara H; Goto T; Ohnishi K; Ogura H; Kage H; Matsuno Y (Dainippon
Ink & Chemicals Inc.; Kyushu, Institute of Technology)

SO Journal of Applied Polymer Science 81, No.1, 5th July 2001, p.128-33
ISSN: 0021-8995
CODEN: JAPNAB

PY 2001

DT Journal

LA English

AB A **monomer** preemulsion, used for miniemulsion
polymerisation, was prepared by stirring a **mixture** of
epoxy resin, acrylic **monomers**, surfactants, costabiliser and
water. Miniemulsion **polymerisation** produced the
composite latex. Methacrylic acid and/or dimethylaminoethyl
methacrylate were added to introduce the functional groups into the
composite latices. The functional groups were introduced either
by batch **polymerisation** or two-stage **polymerisation**.
the **latex** produced by the two-stage **polymerisation**
method had good **polymerisation** stability, storage stability and
solvent resistance. 11 refs.

CC 43E; 42C351; 6121; 627; 72233

SC *KV; KK; OB; OK; KB

CT **ACRYLIC POLYMER**; ANIONIC; **BULK POLYMERISATION**;
BULK POLYMERIZATION; CHEMICAL RESISTANCE; COMPANIES; COMPANY;
COMPOSITE; COSTABILISER; COSTABILIZER; CROSSLINKING; DATA;
DIAGRAM; DROPLET; **EMULSION POLYMERISATION**; EPOXIDE RESIN; EPOXY
GROUP; EPOXY RESIN; FILM; FILMS; FLOW CHART; FUNCTIONAL GROUP; GRAPH;
INSTITUTION; LATEX; LATICES; **MASS POLYMERISATION**; MECHANISM;
MINI-EMULSION POLYMERISATION; **MINI-EMULSION**
POLYMERIZATION; MORPHOLOGICAL PROPERTIES; MORPHOLOGY;
NON-IONIC; PARTICLE MORPHOLOGY; PARTICLE SIZE; PLASTIC;
POLYEPOXIDE; **POLYMERISATION**; **POLYMERIZATION**;
POLYOXYETHYLENE ALKYLARYL ETHER; POLYOXYETHYLENE ALKYLPHENYLETHER;
PROPERTIES; SIZE; SOLVENT RESISTANCE; SOLVENT RESISTANT; STABILITY;
STORAGE STABILITY; SURFACE ACTIVE AGENT; SURFACTANT; TABLES; TECHNICAL;
THERMOPLASTIC; THERMOSET; **TWO-STAGE POLYMERISATION**;
TWO-STAGE POLYMERIZATION

NPT BUTYL ACRYLATE; CETANE; DIMETHYLAMINOETHYL METHACRYLATE; HEXADECANE;
METHACRYLIC ACID; METHYL METHACRYLATE; METHYLMETHACRYLATE; MMA;
MONOMER; MONOMETHYL METHACRYLATE; SODIUM SALT

SHR EPOXY RESINS, latex, **composites**, emulsion
polymerisation; **ACRYLIC POLYMERS**, latex,
composites, emulsion **polymerisation**; **LATEX**, epoxy

resins, acrylic **polymers**, **composites**, emulsion
polymerisation; **COMPOSITES**, epoxy resins, acrylic
polymers, **latex**, emulsion **polymerisation**;
EMULSION **POLYMERISATION**, miniemulsion **polymerisation**,
epoxy resins, acrylic **polymers**, **latex**,
composites

GT JAPAN
TN EMULGEN 931; LEVENOL WZ; EPICRON 850

L164 ANSWER 7 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:705484 RAPRA FS Rapra Abstracts
TI **GELATIN AND POLYMER LATEX** DISPERSION
COATING **COMPOSITIONS**.
IN Honan J S; Walters J B; Whitesides T H
PA Eastman Kodak Co.
CA Rochester, N.Y., USA
PI US 5731134 A 19980324
AI US 1996-605237 19960209
DT Patent
LA English
IC ICM C03C001-053
ICS C03C001-015; C03C007-388; C08K001-00

AB Stable photographic coating **compositions** comprising a
polymer latex are prepared by mixing an aqueous
solution comprising **gelatin** with a latex dispersion of a
polymer of formula: (A)x(B)y(C)z, where A and B are formed from
nonionic monomers; C is formed from anionic
monomers, and x, y and z are **monomer** weight fractions
where x = 0-1.0, y = 0-1.0, x+y = 0.98-1.0, and z = 0-0.02, where A, B, x
and y are such that **latex** dispersions of **polymers** of
the formula (A)x(B)y have calcium ion critical coagulation concentrations
of less than 80 mM Ca²⁺ in **gelatin** solutions. The
gelatin of the aqueous solution mixed with the latex dispersion
comprises a **gelatin** of low calcium ion content such that the
coating **composition** has a calcium Ca²⁺ concentration of less
than 2 mM. The method of the invention allows for the preparation of
aqueous **gelatin** coating solutions comprising **latex**
dispersions of **polymers** which are unstable in the presence of
calcium ions. The process can yield dispersions and photographic elements
with superior attributes, including dispersion stability, and
photographic **colour** reproduction, image preservability and
abrasion resistance.

CC 6K1; 6A3; 6121; 41
SC *QK; OB
CT ABRASION RESISTANCE; ABRASION RESISTANT; ANIONIC; APPLICATION; AQUEOUS
SOLUTION; COAGULATION; COATING; COMPANIES; COMPANY; CRITICAL
CONCENTRATION; DISPERSION; DISPERSION STABILITY; LATEX; LATICES;
MECHANICAL PROPERTIES; MIXING; **NON-IONIC**; PHOTOGRAPHIC
APPLICATION; PLASTIC; **POLYMER**; STABILITY; TECHNICAL;
THERMOPLASTIC; THERMOSET; WEAR RESISTANCE; WEAR RESISTANT

NPT CALCIUM ION; **GELATIN**; **GELATINE**
SHR PHOTOGRAPHIC APPLICATIONS, coatings; COATINGS, photographic;
LATEX, **polymer**, dispersions; **GELATIN**, aqueous
solutions; DISPERSIONS, latex

GT USA

L164 ANSWER 8 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:698626 RAPRA FS Rapra Abstracts

TI TONER **COMPOSITIONS** AND PROCESSES.
IN Ong B S; Mychajlowski W; Kmiecik-Lawrynowicz G E; Patel R D; Sanders D
J; Drappel S V
PA Xerox Corp.
CA Stamford, Connecticut, USA
PI US 5747215 A 19980505
AI US 1997-841300 19970429
DT Patent
LA English
ICM G03G009-087
AB A process for the preparation of toner comprises: (i) blending (a) a
colourant dispersion containing a first ionic surfactant and an
optical charge control agent with (b) a latex blend comprised of linear
polymer and crosslinked **polymer** particles, optionally
nonionic surfactant and a second ionic surfactant with a charge
polarity opposite to that of the first ionic surfactant in the
colourant dispersion; (ii) heating the resulting **mixture**
at below the glass transition temperature (Tg) of the linear
latex polymer to form toner sized aggregates; and (iii)
subsequently heating the aggregate suspension about above the Tg of the
linear **latex polymer** to effect fusion or coalescence
of the aggregates, and wherein the linear **polymer** is of an Mw
of from about 20000-40000.
CC 6121; 6A32
SC *OB; QB
CT BLEND; CHARGE CONTROL AGENT; **COLORANT**; **COLOURANT**;
COMPANIES; COMPANY; **COMPOSITE**; DISPERSION; ELASTOMER; FUSION;
GLASS TRANSITION; GLASS TRANSITION TEMPERATURE; LATEX; LATICES; PLASTIC;
RUBBER; SURFACE ACTIVE AGENT; SURFACTANT; TECHNICAL; TG; THERMOPLASTIC;
THERMOSET; TONER
SHR TONERS, dispersions; DISPERSIONS, toners
GT USA

L164 ANSWER 9 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:663557 RAPRA FS Rapra Abstracts
TI PROCESSES FOR THE PRODUCTION OF LATEX-CEMENT **COMPOSITES**.
AU d'Antonio C
SO Coatings & Composite Materials 4, No.13, March 1996, p.22-7
PY 1996
DT Journal
LA Italian
AB An examination is made of the production, **composition** and
properties of Portland cements containing aggregates and modified with
rubber or thermoplastic latices. The formulation of a cement containing
SBR latex and sand for use in corrosion resistant flooring is discussed.
CC 42D11C21; 6121; 627; 62.12; 6R1; 935
SC *ON; KF; KO; OB; OK; QP; UE
CT ABRASION RESISTANCE; ABRASION RESISTANT; **ACRYLATE POLYMER**;
ACRYLIC ESTER POLYMER; ADDITIVE; ADHESION; AGGREGATE; AIR
CONTENT; ALKALI RESISTANCE; ANIONIC SURFACTANT; ANTI-FOAMING AGENT;
ANTIFOAMING AGENT; APPLICATION; AQUEOUS DISPERSION; AQUEOUS EMULSION;
ARAMID FIBER; ARAMID FIBRE; BINDER; BUILDING APPLICATION;
BUTADIENE-STYRENE COPOLYMER; CATIONIC; CEMENT; CHEMICAL
MODIFICATION; CHEMICAL PROPERTIES; CHEMICAL RESISTANCE; CHEMICAL
RESISTANT; **CHLOROPRENE POLYMER**; COHESION; **COMPOSITE**;
COMPOUNDING; COMPRESSION PROPERTIES; COMPRESSION STRENGTH; CONCRETE;
CORROSION RESISTANCE; CORROSION RESISTANT; CR; DATA; DEFOAMING AGENT;
DENSITY; DISPERSION; ELASTOMER; EMULSION; EPOXIDE RESIN; EPOXY RESIN;

EQUATION; **ETHYLENE-VINYL ACETATE COPOLYMER**; EVA; FAILURE;
 FIBRE; FILLER; FILM FORMING; FLOOR; FLOORING; FORMULATION; FREE-RADICAL
 INITIATOR; GRAPH; GRAVEL; HEAT RESISTANCE; HYDRATION; INITIATOR; LATEX;
 LATICES; MECHANICAL PROPERTIES; METAL FIBER; METAL FIBRE; MIXING;
 MOISTURE CONTENT; MORTAR; NATURAL RUBBER; NEOPRENE; NOMOGRAM;
NON-IONIC; NR; PARTICLE SIZE; PH; PIGMENT; PLASTIC; POLYACRYLATE;
 POLYCHLOROPRENE; POLYEPOXIDE; **POLYMER CEMENT**; **POLYMER**
CONCRETE; **POLYMERIC BINDER**; **POLYMERISATION**;
POLYMERISATION INITIATOR; **POLYMERIZATION**;
POLYMERIZATION INITIATOR; POLYPROPENE; POLYPROPYLENE;
POLYVINYL ACETATE; PORTLAND CEMENT; PP; PROPERTIES; PVAC;
 REINFORCED CEMENT; REINFORCED CONCRETE; REINFORCED MORTAR; REINFORCEMENT;
 RHEOLOGICAL PROPERTIES; RHEOLOGY; RUBBER; SAND; SBR; SOLIDS CONTENT;
 STABILISER; STABILITY; STABILIZER; STONE; **STYRENE COPOLYMER**;
 SURFACE ACTIVE AGENT; SURFACE TENSION; SURFACTANT; TABLES; TECHNICAL;
 TEMPERATURE; THERMAL STABILITY; THERMOPLASTIC; THERMOSET; TRADE NAME;
VINYL ACRYLATE COPOLYMER; **VINYL CHLORIDE COPOLYMER**;
VINYLDIENE CHLORIDE COPOLYMER; VISCOSITY; WATER CONTENT; WATER
 RESISTANCE; WATER RESISTANT; WEAR RESISTANCE; WEAR RESISTANT
 NPT CARBON FIBER; CARBON FIBRE; CHLORIDE ION; **ETHYLENE OXIDE**; FIBRE
 GLASS; GLASS FIBER; GLASS FIBRE; **IRON OXIDE**; NONYLPHENOL;
 OXIRANE; **SILICA**; SILICON DIOXIDE; WATER
 SHR CEMENT, latex, plastics, rubbers, SBR, floors, corrosion resistance,
composites; **COMPOSITES**, latex, plastics, rubbers, SBR,
 cement, floors, corrosion resistance; FLOORS, corrosion resistance,
 cement, latex, plastics, rubbers, SBR, **composites**; LATEX,
 plastics, rubbers, SBR, cement, **composites**, corrosion
 resistance, floors; **STYRENE BUTADIENE COPOLYMERS**, corrosion
 resistance, **latex**, cement, **composites**, floors;
 CORROSION RESISTANCE, plastics, rubbers, SBR, **composites**,
 cement, floors, latex
 GT EUROPEAN COMMUNITY; EUROPEAN UNION; ITALY; WESTERN EUROPE
 L164 ANSWER 10 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
 AN R:659099 RAPRA FS Rapra Abstracts
 TI WATER BASED TONER RECEPTIVE CORE/SHELL LATEX **COMPOSITIONS**.
 IN Sarkar M; Lu Y-Y
 PA Minnesota Mining & Mfg.Co.
 CA St. Paul, Minn., USA
 PI US 5624747 A 19970429
 AI US 1995-541800 19951010
 DT Patent
 LA English
 IC ICM B32B005-16
 ICS B32B009-04; B32B027-06; B32B027-36
 AB These comprise from about 65 to 99 parts of a transparent film-forming
 core/shell **latex polymer**, from about 1 to 15 parts
polymeric particles and from 0 to about 20 parts of an antistatic
 agent, such as cationic, anionic, fluorinated or **non-**
ionic agents. They are suitable for electrophotographic or
 xerographic imaging.
 CC 6121; 6A
 SC *QB; OB
 CT ANIONIC; ANTISTATIC AGENT; CATIONIC; CHEMICAL MODIFICATION; COMPANIES;
 COMPANY; **COMPOSITION**; CORE-SHELL; ELASTOMER;
 ELECTROPHOTOGRAPHIC; FILM FORMING; FLUORINATION; IMAGING; LATEX; LATICES;
NON-IONIC; PARTICLE; PLASTIC; RUBBER; TECHNICAL; TONER;
 TRANSPARENT; WATER-BASED; XEROGRAPHY

SHR TONERS, latex; LATEX, toners
GT USA

L164 ANSWER 11 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:624981 RAPRA FS Rapra Abstracts; Adhesives Abstracts
TI LATEX **COMPOSITION** EMPLOYING SPECIFICALLY DEFINED ETHYLENE
OXIDE/PROPYLENE OXIDE BLOCK COPOLYMER
SURFACTANT AND **HYDROPHOBIC** DEFOAMING AGENT.
IN Anchor M J; Hollis R P; Drewno G W
PA BASF Corp.
CA Mount Olive, New Jersey, USA
PI US 5525657 A 19960611
AI US 1994-321112 19941011
DT Patent
LA English
IC ICM C08K005-24
ICS C08K005-04
AB An improved latex **composition** is provided that exhibits a
superior ability to form a substantially uniform **polymeric** film
when applied to a substrate. The **composition** is capable of
being handled and applied to a substrate in the absence of excessive
foaming. The aqueous **composition** includes as essential
components specified concentrations of a specifically-defined normally
liquid predominantly hydrophobic **nonionic** ethylene
oxide-propylene oxide block copolymer
surfactant, and a solely hydrophobic defoaming agent (e.g. a
hydrocarbon-based mineral oil). It is possible for the
composition to be applied even to a hydrophobic substrate (e.g. a
polyester film substrate). **Compositions** of the present
invention, following application to a substrate and the volatilisation of
the water component, form a substantially uniform **polymeric**
film that can serve as a coating or adhesive.
CC 6121; 6A1; 6A3
SC *OB; QB
*ADAHM
CT ADHESIVE; ANTI-FOAMING AGENT; COATING; COMPANIES; COMPANY; DEFOAMING
AGENT; ELASTOMER; **ETHYLENE OXIDE COPOLYMER**; FILM; FILMS;
HYDROPHOBIC; HYDROPHOBICITY; LATEX; LATICES; **OXIRANE COPOLYMER**;
PLASTIC; **POLYMERIC SURFACE ACTIVE AGENT**; **POLYMERIC**
SURFACTANT; **PROPYLENE OXIDE COPOLYMER**; RUBBER; SURFACTANT;
TECHNICAL; THERMOPLASTIC; THERMOSET
SHR **LATEX**, **polymeric** surfactants, coatings, adhesives;
COATINGS, latex; ADHESIVES, latex
SHA **LATEX**, **polymeric** surfactants
GT USA

L164 ANSWER 12 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:616301 RAPRA FS Rapra Abstracts; Adhesives Abstracts
TI SURFACE ENERGETICS OF FILMS OF **POLY(VINYL**
ACETATE-BUTYL ACRYLATE) EMULSION **COPOLYMERS**.
AU Erbil H Y (Marmara Research Centre)
SO Polymer 37, No.24, 1996, p.5483-91
ISSN: 0032-3861
CODEN: POLMAG
PY 1996
DT Journal
LA English
AB The surface energetics of films of **poly(vinyl**

acetate-butyl acrylate) semi-continuous emulsion copolymers were studied. Non-ionic emulsifiers, low temperature initiators and controlled comonomer initiator addition were used. Increasing the butyl acrylate content of the copolymer resulted in a decrease of average particle size and glass transition temperature. The viscosity-average molecular weight increased up to 40 mol% butyl acrylate content and then slowly decreased. The apolar Lifshitz-Van der Waals surface tension component was unaffected by change in butyl acrylate content, but the electron donor surface tension coefficient decreased considerably with increasing butyl acrylate. The work of adhesion of cellulose and cellulose acetate surfaces with the copolymer latex films was found to decrease with increasing butyl acrylate content. 36 refs.

CC 42C3311A; 42C3511A; 6125; 72233; 9.11.2; 9.12; 966; 9113; 9114

SC *KJ; KK; OD; KB; UL; UM; UH; UC

CT *ADAHM; ADANB; ADARM; ADAUL; ADAUM; ADAUH; ADAUC

ADHESION; BUTYL ACRYLATE COPOLYMER; CALCULATION; CELLULOSE; CELLULOSE ACETATE; CHEMICAL STRUCTURE; COMPANIES; COMPANY; COPOLYMER COMPOSITION; DATA; ELASTOMER; EMULSIFIER; EMULSION COPOLYMERISATION; EMULSION COPOLYMERIZATION; EMULSION POLYMERISATION; EQUATION; FILM; FILMS; GLASS TRANSITION; GLASS TRANSITION TEMPERATURE; GRAPH; INITIATOR; LATEX; LATICES; MOLEC.WT.; MOLECULAR MASS; MOLECULAR STRUCTURE; MOLECULAR WEIGHT; PARTICLE SIZE DISTRIBUTION; PLASTIC; POLYMERISATION; POLYMERIZATION; PROPERTIES; REACTION CONDITIONS; REACTION MECHANISM; RHEOLOGICAL PROPERTIES; RUBBER; SEMI-CONTINUOUS; SURFACE ENERGIES; SURFACE ENERGY; SURFACE FREE ENERGY; SURFACE PROPERTIES; SURFACE TENSION; TABLES; TECHNICAL; TG; THEORY; THERMOPLASTIC; VINYL ACETATE COPOLYMER; VISCOSITY; VISCOSITY-AVERAGE MOLECULAR WEIGHT

NPT AMMONIUM PERSULFATE; AMMONIUM PERSULPHATE; NONYLPHENYL ETHOXYLATE; SODIUM FORMALDEHYDE SULFOXYLATE; SODIUM FORMALDEHYDE SULPHOXYLATE

SHR VINYL ACETATE COPOLYMERS, films, emulsion copolymerisation, surface tension, particle size, glass transition, molecular weight, molecular structure, adhesion; BUTYL ACRYLATE COPOLYMERS, films, emulsion copolymerisation, surface tension, particle size, glass transition, molecular weight, molecular structure, adhesion; FILMS, vinyl acetate copolymers, butyl acrylate copolymers, emulsion copolymerisation, surface tension, particle size, glass transition, molecular weight, molecular structure, adhesion; EMULSION COPOLYMERISATION, reaction conditions, vinyl acetate copolymers, butyl acrylate copolymers, films; SURFACE TENSION, vinyl acetate copolymers, butyl acrylate copolymers, films, copolymer composition; PARTICLE SIZE, vinyl acetate copolymers, butyl acrylate copolymers, films, distribution, copolymer composition; GLASS TRANSITION, vinyl acetate copolymers, butyl acrylate copolymers, films, copolymer composition; MOLECULAR WEIGHT, viscosity average, vinyl acetate copolymers, butyl acrylate copolymers, films, copolymer composition; MOLECULAR STRUCTURE, vinyl acetate copolymers, butyl acrylate copolymers, films, copolymer composition; ADHESION, vinyl acetate copolymers, butyl acrylate copolymers, films, latex to cellulose, latex to cellulose acetate

SHA VINYL ACETATE COPOLYMERS, films, emulsion copolymerisation, surface tension, particle size, glass transition, molecular weight, molecular structure, adhesion; BUTYL

ACRYLATE COPOLYMERS, films, emulsion copolymerisation, surface tension, particle size, glass transition, molecular weight, molecular structure, adhesion; FILMS, vinyl acetate copolymers, butyl acrylate copolymers, emulsion copolymerisation, surface tension, particle size, glass transition, molecular weight, molecular structure, adhesion; EMULSION COPOLYMERISATION, reaction conditions, vinyl acetate copolymers, butyl acrylate copolymers, films; SURFACE TENSION, vinyl acetate copolymers, butyl acrylate copolymers, films, copolymer composition; PARTICLE SIZE, vinyl acetate copolymers, butyl acrylate copolymers, films, distribution, copolymer composition; GLASS TRANSITION, vinyl acetate copolymers, butyl acrylate copolymers, films, copolymer composition; MOLECULAR WEIGHT, viscosity average, vinyl acetate copolymers, butyl acrylate copolymers, films, copolymer composition; MOLECULAR STRUCTURE, vinyl acetate copolymers, butyl acrylate copolymers, films, copolymer composition; ADHESION, vinyl acetate copolymers, butyl acrylate copolymers, films, latex to cellulose, latex to cellulose acetate

GT TURKEY

TN NP-10; NP-30; RONGALIT C

L164 ANSWER 13 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN

AN R:609170 RAPRA FS Rapra Abstracts

TI WATER BASED TONER RECEPTIVE CORE/SHELL LATEX COMPOSITIONS.

IN Sarkar M; Ying-Yuh L

PA Minnesota Mining & Mfg.Co.

CA St. Paul, Minn., USA

PI US 5500457 A 19960319

AI US 1994-342158 19941118

DT Patent

LA English

IC ICM C08F267-02

ICS C08L051-00; C08L033-08; C08L033-10

AB These comprise from about 65 to 99 parts of a transparent film-forming core/shell latex polymer, from about 1 to 15 parts polymeric particles and from 0 to 20 parts of an antistatic agent, such as a cationic, anionic, fluorinated or non-ionic agent. They are suitable for electrophotographic or xerographic imaging. The ratio of core to shell of the core/shell latex polymer ranges from about 10/90 to 90/10 with the core having a lower Tg than the shell.

CC 6121

SC *OB

CT ANIONIC; ANTISTATIC AGENT; CATIONIC; COMPANY; COMPOSITION; CORE-SHELL; ELASTOMER; ELECTROPHOTOGRAPHIC; FLUORINATION; GLASS TRANSITION TEMPERATURE; IMAGING; LATEX; MOLAR RATIO; NON-IONIC; PARTICLE; PLASTIC; RUBBER; TECHNICAL; TG; TONER; TRANSPARENT; WATER-BASED; XEROGRAPHY

SHR LATEX, core shell copolymers

GT USA

L164 ANSWER 14 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN

AN R:603130 RAPRA FS Rapra Abstracts

TI DEFOAMING COMPOSITIONS FOR ABS LATICES.

IN Eichenauer H; Piejko K-E; Bunte H-J; Thiem H-J

PA Bayer AG
CA Leverkusen, Germany
PI US 5486583 A 19960123
AI US 1994-350695 19941207
PRAI DE 1993-4343207 19931217
DT Patent
LA English
IC ICM C08K005-36
ICS B01D019-04
AB These comprise a C10 to C20 alcohol, a mineral oil, an ester from a thiodicarboxylic acid with 4 to 8 carbon atoms and C10 to C20 alcohol and a **non-ionic** emulsifier. They are used to remove residual **monomers** from ABS **lattices**.
CC 42C21C391D11; 6121; 59; 726
SC *MJ; OB; KF
CT ABS; ANTI-FOAMING AGENT; COMPANY; DEFOAMING AGENT; EMULSIFIER; LATEX; **NON-IONIC**; PLASTIC; PURIFICATION; **RESIDUAL MONOMER**; TECHNICAL; THERMOPLASTIC
NPT ALCOHOL; MINERAL OIL; THIODICARBOXYLATE
SHR DEFOAMING AGENTS; LATEX,ABS,purification; ACRYLONITRILE BUTADIENE STYRENE **TERPOLYMERS, latex**, purification; PURIFICATION, latex, ABS
GT EUROPEAN COMMUNITY; EUROPEAN UNION; GERMANY; WESTERN EUROPE

L164 ANSWER 15 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:603015 RAPRA FS Rapra Abstracts
TI AQUEOUS PAINT **COMPOSITION**.
IN Takarabe K; Sugiyama T; Bardman J K; Tamura Y; Shinoda T
PA Rohm & Haas Co.
CA Philadelphia, Pennsylvania 19106-2399, USA
Postcode: 19106-2399
PI EP 728822 A2 19960828
DS DE; ES; FR; GB; IT; NL; SE
AI EP 1996-300938 19960212
PRAI JP 1995-51979 19950216
DT Patent
LA English
IC ICM C09D157-00
ICS C09D133-08
AB This comprises a latex, which is a film-forming **latex polymer** having anionic property, a water-soluble or water-dispersible **polymer** formed from a **monomer mixture** containing at least 20 weight% of amine functional group-containing **monomer** and an efficient amount of volatile base to raise the pH of the **composition** to a sufficiently high level to bring essentially all amine functional groups to a **non-ionic** state. The solubility of the **monomers** forming the **polymer**, excluding the **monomers**, which show anionic property, is 0.01 to 1.50g per 100 g of water. The paint is quick-drying with a low sensitivity to temperature and high rubber elasticity.
CC 6121; 6A31
SC *QB; OB
CT ANIONIC; BASE; COMPANY; **COMPOSITION**; DRYING TIME; ELASTICITY; ELASTOMER; FUNCTIONAL GROUP; LATEX; **NON-IONIC**; PAINT; PH; PLASTIC; RUBBER; SOLUBILITY; TECHNICAL; TEMPERATURE SENSITIVITY; VOLATILE; WATER SOLUBLE; WATER-DISPERSIBLE
NPT WATER
SHR PAINTS, latex; LATEX, paints

GT USA

L164 ANSWER 16 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:599953 RAPRA FS Rapra Abstracts
TI SOLUTIONS, LATEXES AND CARPET COATING **COMPOSITIONS** CONTAINING
NOVEL ASSOCIATIVE **MONOMERS** AND **POLYMERS**.
IN Wilkerson J M; Verstrat D W; Barron M C
PA National Starch & Chemical Investment Holding Corp.
CA Wilmington, Delaware, USA
PI US 5478881 A 19951226
AI US 1995-430072 19950427
DT Patent
LA English
IC ICM C08L033-00
AB Novel mono- and multi-functional **non-ionic** urethane
monomers are prepared from surfactants comprising ethylene
oxide-butylene oxide copolymers, preferably
C1-C4 alkoxy-terminated, monohydric, ethylene **oxide-butylene**
oxide block polymers and monoethylenically unsaturated
aliphatic isocyanates. When **polymerised** with, e.g. acrylic acid
or alkyl acrylates, these **monomers** provide **copolymers**
exhibiting greatly enhanced thickening efficiency.
CC 43C6; 6122; 6121; 6A3
SC *KT; OB; QB
CT COATING; COMPANY; ELASTOMER; LATEX; PLASTIC; POLYURETHANE; RUBBER;
SOLUTION; SURFACE ACTIVE AGENT; SURFACTANT; TECHNICAL; THERMOPLASTIC;
THERMOSET; **URETHANE POLYMER**
SHR **URETHANE POLYMERS**, solutions, **latices**, coatings;
SOLUTIONS, urethane **polymers**; **LATEX**, urethane
polymers; COATINGS, carpets, urethane **polymers**
GT USA

L164 ANSWER 17 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:520006 RAPRA FS Rapra Abstracts
TI ADDITIVE **COMPOSITION** FOR OIL AND GAS WELL CEMENTING
FORMULATIONS HAVING **NON-IONIC** AND ANIONIC SURFACTANT
STABILISERS TO IMPROVE THE FLUID LOSS PROPERTIES THEREOF.
IN Gopalkrishnan S
PA BASF Corp.
CA Parsippany, N.J., USA
PI US 5300542 A 19940405
AI US 1993-132773 19931006
DT Patent
LA English
IC ICM C08J005-10
ICS C08K003-00; C08L009-08
AB This comprises styrene/butadiene latex and a combination of surfactants.
CC 42D11C21; 6121; 63Pet
SC *PO; OB
CT ANIONIC; **BUTADIENE-STYRENE COPOLYMER**; COMPANY; ELASTOMER;
FLUID; GAS RECOVERY; LATEX; LOSS; **NON-IONIC**; OIL RECOVERY;
RUBBER; **STYRENE-BUTADIENE COPOLYMER**; SURFACE ACTIVE AGENT;
SURFACTANT; TECHNICAL
SHR OIL RECOVERY, **latex**, styrene butadiene **copolymers**; GAS
RECOVERY, **latex**, styrene butadiene **copolymers**; STYRENE
BUTADIENE **COPOLYMERS**, **latex**, oil recovery, gas recovery;
LATEX, styrene butadiene **copolymers**, oil recovery, gas
recovery

GT USA

L164 ANSWER 18 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:513310 RAPRA FS Rapra Abstracts; Adhesives Abstracts
TI AQUEOUS **COMPOSITION**.
IN Xiaohong C
PA Rohm & Haas Co.
CA Independence Mall West, Philadelphia, Pennsylvania 19105, USA
Postcode: 19105
PI EP 594321 A1 19940427
DS AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
AI EP 1993-307857 19931001
PRAI US 1992-965486 19921023; US 1992-965487 19921023
DT Patent
LA English
IC ICM C08L101-08
ICS C08L101-02; E04F013-08; B05D005-00
AB The **composition** comprises a film-forming **latex polymer** having an anionic character, a water-soluble or water-dispersible **polymer** formed from at least about 20 weight% **monomer** containing amine functional groups and a volatile base for raising the pH of the **composition** to a point high enough where essentially all of the amine functional groups are in a **non-ionic** state and, optionally, a water-soluble or water-dispersible multivalent metal. It provides an aqueous, quick-set non-cementitious **composition**, which is easily applied, develops early cohesive strength and leaves no waste under all curing conditions. Uses include adhesives for exterior insulating and finishing systems, exterior coatings with early washout resistance and dirt pick-up resistance, binders for traffic paint and base coats and/or top coats for exterior insulation finishing systems.
CC 6A3; 6A1
SC *QB
*ADALF
CT ADHESIVE; AMINE GROUP; ANIONIC; BASE; BINDER; BUILDING APPLICATION; COHESIVE STRENGTH; COMPANY; ELASTOMER; FUNCTIONAL GROUP; LATEX; **NON-IONIC**; PAINT; PH; PLASTIC; RAPID-SETTING; ROAD; RUBBER; SOILING RESISTANCE; TECHNICAL; VOLATILE; WASHOUT RESISTANCE; WATER SOLUBLE; WATER-DISPERSIBLE
NPT METAL; WATER
SHR COATINGS; ADHESIVES
SHA BUILDING APPLICATIONS
GT USA

L164 ANSWER 19 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:460577 RAPRA FS Rapra Abstracts
TI **POLYMERISATION** IN MICROEMULSION: SIZE AND SURFACE CONTROL OF ULTRAFINE LATEX PARTICLES.
AU Antonietti M; Lohmann S; Bremser W (BASF LACKE & FARBEN AG; MARBURG, UNIVERSITAT)
SO Progress in Colloid & Polymer Science 89,1992,p.62-5
ISSN: 0340-255X
CODEN: PCPSD7
PY 1992
DT Journal
LA English
AB Size control and surface functionalisation of droplets in microemulsion **polymerisation** is examined. The styrene/cetyl trimethylammonium

chloride/water system is shown to form an ideal microemulsion in terms of a simple geometric model in which droplet size is a function of the amount of surfactant. **Mixtures** with the **non-ionic polymeric** surfactant Lutensol AT 50 (a modified polyethylene oxide) obey a more complex behaviour which prohibits effective size control. The particle surface is easily modified by addition of functional comonomers such as methacrylates, potassium styrene sulphonate, diethyl-4-vinylbenzyl amine and 2-vinylpyridine, or by non-**polymerisable** dopants such as styrene-4-vinylpyridine block **copolymers**. 8 refs.

CC 42C21; 72233; 6121; 94
SC *KB; OB; UF; KF
CT ADDITIVE; BLEND; **BLOCK COPOLYMER**; COLLOID STABILITY; COLLOIDAL PROPERTIES; COMPANIES; COMPANY; DATA; DOPANT; EMULSION; **EMULSION POLYMERISATION**; EQUATION; **ETHYLENE OXIDE POLYMER**; FUNCTIONALISATION; GRAPH; INTERFACIAL PROPERTIES; ION BINDING; LATEX; **METHACRYLATE COPOLYMER**; MICROEMULSION; **MICROEMULSION POLYMERISATION**; MODEL; MODEL COMPOUND; MORPHOLOGICAL PROPERTIES; **NON-IONIC**; PARTICLE; PARTICLE MORPHOLOGY; PARTICLE SIZE; PLASTIC; **POLYETHYLENE OXIDE**; **POLYMERIC SURFACTANT**; **POLYMERISATION**; POLYSTYRENE; **POTASSIUM STYRENE SULPHONATE COPOLYMER**; PS; REACTIVITY; **STYRENE COPOLYMER**; **STYRENE POLYMER**; SURFACE MODIFICATION; SURFACE PROPERTIES; SURFACE TREATMENT; SURFACTANT; TABLES; TECHNICAL; THERMOPLASTIC; TRADE NAME; ULTRAFINE; **VINYL BENZYLAMINE COPOLYMER**; **VINYL PYRIDINE COPOLYMER**; **EMULSION POLYMERIZATION**; FUNCTIONALIZATION; **MICROEMULSION POLYMERIZATION**; **POLYMERIZATION**; **POTASSIUM STYRENE SULFONATE COPOLYMER**

NPT CETYLTRIMETHYLAMMONIUM CHLORIDE
SHR EMULSION **POLYMERISATION**, PS; LATEX, PS, colloidal properties; **STYRENE POLYMERS**, latex, emulsion
polymerisation, colloidal properties; COLLOIDAL PROPERTIES, PS, latex

GT GERMANY
TN LUTENSOL AT 50

L164 ANSWER 20 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:171586 RAPRA FS Rapra Abstracts
TI SURFACTANT INTERACTIONS IN **POLY(VINYL ACETATE)**) AND **POLY(VINYL ACETATE-BUTYL ACRYLATE)** LATEXES.
AU Vijayendran B R; Bone T; Cajria C
SO Journal of Applied Polymer Science 26, No.4, April 1981, p.1351-9
ISSN: 0021-8995
CODEN: JAPNAB
PY 1981
DT Journal
LA English
AB Three vinyl acetate-butyl acrylate **copolymer latexes** of varying acrylate content were synthesised and adsorption by saturation and penetration of several anionic surfactants at the latex/water interface was investigated. The effects of molec.weight and structure of surfactants, latex **composition**, and presence of adsorbed layers on penetration of surfactant leading to the formation of a solubilised **polymer-surfactant** complex and latex thickening were considered. Saturation adsorption of **non-ionic** surfactants was correlated with the polarity of the **polymer** surface. 15 refs.

CC 42C3311C3511; 6121; 9.11.4

CT LATEXES; PARTICLE SIZE; MOLEC.WT.; MORPHOLOGICAL PROPERTIES; CONTACT
ANGLE; PVAC; SURFACE PROPERTIES; ADSORPTION; SURFACE ACTIVE AGENT;
SYNTHESIS; **VINYL ACETATE COPOLYMER**; PLASTIC; INTERFACE;
POLARITY; **EMULSION POLYMERISATION**; **BUTYL ACRYLATE**
COPOLYMER; **EMULSION POLYMERIZATION**
NPT WATER

L164 ANSWER 21 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:55329 RAPRA FS Rapra Abstracts
TI STABILITY OF **POLYMER LATICES** PREPARED USING
MIXTURES OF ANIONIC AND **NONIONIC** SURFACTANTS.
AU ONO H; JIDAI E; FUJII A
SO Journal of Physical Chemistry 79, No.19,11TH SEPT.1975, p.2020-4
PY 1975
DT Journal
LA English
AB WORK CONCERNING THE EFFECT OF SURFACTANTS ON THE STABILITY OF
POLYMER LATICES HAS BEEN LIMITED TO THE STUDY OF
SURFACTANTS ADDED AFTER THE PREPARATION OF THE DISPERSIONS. LITTLE
ATTENTION HAS BEEN PAID TO THE EFFECT OF SURFACTANTS PRESENT DURING THE
PROCESS OF EMULSION **POLYMERISATION**. THE PRESENT WORK WAS
PERFORMED IN ORDER TO STUDY THIS ASPECT OF THE STABILITY PROBLEM. FOR
THIS PURPOSE PMMA, ACRYLONITRILE-METHYL METHACRYLATE **COPOLYMER**
AND ACRYLONITRILE-STYRENE **COPOLYMER LATICES** WERE
PREPARED BY EMULSION **POLYMERISATION** USING **MIXTURES** OF
ANIONIC AND **NONIONIC** SURFACTANTS. THE STABILITY AND
ELECTROPHORETIC BEHAVIOUR OF THESE **POLYMER LATICES**
WERE INVESTIGATED USING SODIUM CHLORIDE, MAGNESIUM CHLORIDE AND BARIUM
CHLORIDE AS COAGULATING AGENTS. 20 REFS.
CC 6121; 59C; 94
CT PMMA; **ACRYLONITRILE-METHYL METHACRYLATE COPOLYMER**; COLLOID
STABILITY; SURFACE ACTIVE AGENT; ELECTROPHORESIS; **ACRYLONITRILE**
COPOLYMER; STABILISAT; **EMULSION POLYMERISATION**;
STYRENE COPOLYMER; COAGULANT; **EMULSION POLYMERIZATION**;
STABILIZATION
NPT SODIUM CHLORIDE; MAGNESIUM CHLORIDE; BARIUM CHLORIDE

L164 ANSWER 22 OF 22 RAPRA COPYRIGHT 2004 RAPRA on STN
AN R:45048 RAPRA FS Rapra Abstracts
TI STUDIES ON THE STABILITY OF **POLYMER LATICES** PREPARED
USING **MIXTURES** OF ANIONIC AND **NON-IONIC**
SURFACTANTS.
AU ONO H; JIDAI E; FUJII A
SO Journal of Colloid and Interface Science 49, No.1, Oct.1974, p.155-9
PY 1974
DT Journal
LA English
AB A STUDY OF THE EFFECT OF SURFACTANT PRESENT IN EMULSION
POLYMERISATION ON THE STABILITY OF **POLYMER**
LATICES IS PRESENTED. PMMA, ACRYLONITRILE-METHYL METHACRYLATE
COPOLYMER, AND ACRYLONITRILE-STYRENE **COPOLYMER**
LATICES WERE PREPARED BY EMULSION **POLYMERISATION** USING
MIXTURES OF ANIONIC AND **NON-IONIC**
SURFACTANTS. THE STABILITY AND ELECTROPHORETIC BEHAVIOUR OF THESE LATICES
WERE INVESTIGATED USING BARIUM CHLORIDE AS COAGULANT. 10 REFS.
CC 6121; 59A; 94
CT LATICES; PMMA; COLLOID STABILITY; SURFACE ACTIVE AGENT; ELECTROPHORESIS;
ACRYLONITRILE COPOLYMER; **EMULSION POLYMERISATION**;

METHYL METHACRYLATE COPOLYMER; STYRENE COPOLYMER;
COAGULANT; EMULSION POLYMERIZATION
NPT BARIUM CHLORIDE